Check-ins... Not Just for Books! - NUS Libraries' Experience with Foursquare

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CHECKS-INS … NOT JUST FOR BOOKS! - NUS LIBRARIES’ EXPERIENCE WITH FOURSQUARE

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Abstract

Singapore has one of the highest smartphone penetration rates in the world. Social network usage is also among the highest in the world, with a recent report showing that users in Singapore spend the longest period on Facebook in the world (Facebook., 2011). The increasing usage of mobile technologies and social networks is particularly widespread among young people. This presents a good opportunity for academic libraries to tap on mobile technologies to promote and market their services. NUS Libraries has been engaging users through social media channels such as Twitter, Facebook and YouTube with good results and as such we are exploring new social media and mobile technologies to extend our virtual reach to the users. One of the latest mobile technology and social media platform being explored is Foursquare. Foursquare, a location based social networking site allows users to “check-in” and share their location and tips with friends. Given that NUS libraries is the most “checked-in” venue in NUS despite lack of official recognition, it shows great marketing potential for libraries to offer “Specials” to promote library activities and events on Foursquare. This paper will describe the implementation of various Foursquare “Specials” in our different library branches, correlation of physical visits with the number of Foursquare check-ins, consideration of incentives, reactions from users and the lessons learnt. Future implications of Foursquare and similar services would also be touched on.

Keywords: foursquare, location based services, academic libraries, social media

Introduction & literature review

The term “Location based services” (LBS) denotes “applications integrating geographic location (i.e. spatial co-ordinates with the general services” (Schiller & Voisard, 2004, p. 1). With the rise in usage of mobile phones and smart phones in particular, early mobile LBS, such as Gowalla, Loopt, Brightkite and Foursquare that are based on the idea of pairing Global Positioning Services (GPS) in mobile phones with social networking, began to appear.

Such services typically involve doing a “check-in” of the location they are at on their smartphone which can be broadcasted to all their friends. They can also leave tips and hints at specific locations that can be read by their friends or other users. As smartphones became more powerful, further technology and program refinements allowed users to automatically receive tips placed by their friends, or notifications that their friends are nearby when they check-in at different locations.
Foursquare was the first to bring in game based mechanics and pioneered the concept of check-ins for rewards. Besides offering badges to users who frequently check-in, and recognizing the user who has checked-in the most in the last 60 days as “Mayor”, Foursquare also launched Foursquare for businesses, allowing businesses to claim Foursquare venues and offer deals called “Specials” for users who check-in frequently at certain venues.

Big brand names that have launched such specials include McDonalds, Ritz-Carlton, and Starbucks. In one example, McDonalds in the US randomly selected 100 people who checked-in to receive gift cards and saw “a major increase in foot traffic on day of campaign” and 33% increase in check-ins on the day of campaign and 40% the week after (Foursquare, 2011a). Starbucks was the first to offer rewards to Mayors such as $1 discounts to on drinks.

In the library world, librarians were not slow to recognize the potential of location based services with blog posts and articles exploring the concept (E.g. Cuddy & Glassman, 2010; King, 2010; Rethlefsen, 2010).

One of the earliest libraries that we could find on Foursquare was the Vancouver Public Library in 2009 which offered the ‘Mayor’ an opportunity to write book’ reviews that would be featured on the site( Cahill, 2011). Other libraries that are known to offer specials include the Enoch Pratt Free Library which offers movie rentals to mayors. Gleeson Library offered mugs (Hardenbrook, 2011) , while the Darien Library, and Canton Public Libraries offered tote bags worth $25. NYU Health Sciences Libraries also offered prizes to Mayors during the exam periods (Cuddy & Glassman, 2010; King, 2010).

To encourage mass participation beyond just ‘Mayors’, libraries such as the Mudd Library and Orange County Library System offered tokens for users who have checked-in more than a specific number of times, including notebooks and pens and recyclable bags to users(Hardenbrook, 2011). The Barrington Area Library, Barrington, Illinois offered a free book from the librarian’s “secret stash” for the 10th check-in(Cuddy & Glassman, 2010).

Perhaps the most successful library to have partnered with Foursquare was the New York Public Library which was featured in a Foursquare case study. It had not only increased check-ins from 2010 to 2011 by 200%, but also offered a special centennial badge which was ‘unlocked’ 12,000 times(Foursquare, 2011b).

Why we chose to use Foursquare

The National University of Singapore (NUS) Libraries launched blogs, Twitter and Facebook accounts to interact with users in 2007, 2009 and 2011 respectively, and by the end of 2011 were looking for other platforms to be on. With the recent launch of our mobile website, it became a natural succession to look at mobile related technologies. The two technologies we chose to look at were QR codes and location based services.

By the end of 2011, the situation was starting to clarify and it looked like Foursquare was winning the “check-in war” and becoming the dominant platform. Gowalla, Loopt, Brightkite have all either shutdown or “pivoted” and changed the nature of their business. Even Facebook, the dominant force in social networking also “bowed out of the check-in war” (Popper, 2011).
This made the choice to focus on Foursquare easier, but the question on whether our users were on foursquare remained. A survey of the number of check-ins on Foursquare carried out in Oct 2011 found that not only were users regularly doing check-ins at NUS Libraries’ main library, it was the most popular venue in the campus.

<table>
<thead>
<tr>
<th>Venue</th>
<th>Total People</th>
<th>Total Check-ins</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUS Central Library</td>
<td>922</td>
<td>3219</td>
</tr>
<tr>
<td>University Cultural Centre (UCC), NUS</td>
<td>1484</td>
<td>2501</td>
</tr>
<tr>
<td>Techno Edge</td>
<td>583</td>
<td>2390</td>
</tr>
<tr>
<td>NUS Arts Canteen (The Deck)</td>
<td>652</td>
<td>2092</td>
</tr>
<tr>
<td>Frontier Canteen @ NUS</td>
<td>428</td>
<td>1491</td>
</tr>
<tr>
<td>McDonalds (NUS)</td>
<td>514</td>
<td>1177</td>
</tr>
<tr>
<td>NUS Business Canteen (The Terrace)</td>
<td>361</td>
<td>1174</td>
</tr>
<tr>
<td>National University of Singapore (NUS)</td>
<td>466</td>
<td>1030</td>
</tr>
<tr>
<td>NUS Raffles Hall</td>
<td>187</td>
<td>985</td>
</tr>
</tbody>
</table>

Figure 1: Foursquare check-ins in NUS venues as of Oct 2011

As seen in Figure 1, many users were already using Foursquare to Check-in to our library before the library made any attempts to promote it. Of all the venues, NUS Central Library had the greatest number of check-ins and the NUS University Cultural Centre (UCC) was the only venue to have more (unique) people check-ins though the total number of check-ins was less. This is due to the fact that the UCC often hosts events open to the public, unlike the library which is open to NUS students and staff only.

The fact that NUS Central Library was the most popular venue in NUS despite any marketing is a significant one. One possible reason for this was that unlike other venues, broadcasting one’s presence at a library served to be a positive social signaling function.
<table>
<thead>
<tr>
<th>Venue</th>
<th>Total People</th>
<th>Total Check-ins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mugar Library (Boston University)</td>
<td>701</td>
<td>4174</td>
</tr>
<tr>
<td>Butler Library (Columbia University)</td>
<td>784</td>
<td>3553</td>
</tr>
<tr>
<td>Widener Library (Harvard University)</td>
<td>2573</td>
<td>3412</td>
</tr>
<tr>
<td>Perkins Library (Duke University)</td>
<td>562</td>
<td>3283</td>
</tr>
<tr>
<td><strong>NUS Central Library</strong></td>
<td><strong>922</strong></td>
<td><strong>3219</strong></td>
</tr>
<tr>
<td>Li Ka Shing Library (Singapore Management University)</td>
<td>594</td>
<td>1781</td>
</tr>
<tr>
<td>Firestone Library (Princeton University)</td>
<td>161</td>
<td>1431</td>
</tr>
<tr>
<td>Lee Wee Nam Library (Nanyang Technological University)</td>
<td>441</td>
<td>1409</td>
</tr>
<tr>
<td>The Joseph Regenstein Library (Chicago University)</td>
<td>211</td>
<td>1246</td>
</tr>
<tr>
<td>Doe Library (University of California, Berkeley)</td>
<td>321</td>
<td>932</td>
</tr>
<tr>
<td>Sterling Memorial Library (Yale University)</td>
<td>257</td>
<td>876</td>
</tr>
<tr>
<td>Cecil H Green Library (Stanford University)</td>
<td>242</td>
<td>804</td>
</tr>
<tr>
<td>Humanities and Social Sciences Library (McGill University)</td>
<td>75</td>
<td>408</td>
</tr>
<tr>
<td>Main Library (New Wing) (University of Hongkong)</td>
<td>112</td>
<td>366</td>
</tr>
<tr>
<td>MIT Dewey Library (MIT)</td>
<td>60</td>
<td>160</td>
</tr>
</tbody>
</table>

Figure 2: Foursquare check-ins at various selected academic libraries as of Oct 2011

We also benchmarked Foursquare check-ins against a random sample of bigger academic libraries in the world and NUS Libraries did respectably well, see Figure 2.

While some of the early adopters such as the Vancouver Public Library found that despite initial interest and buzz on their social networks, there was no ‘Mayor’ to win the contest! (Cahill, 2011). This could be attributed to a relatively small user base back in 2009 and the relatively unattractive prize of an opportunity to contribute a book review. With the existing user base in 2012, a better response was expected although the magnitude was uncertain.
Approach

The first thing the library needed to do before offering a special was to create its Foursquare Venue if it didn’t exist and to claim the venue if it already did.

As our libraries are not located in the United States, the claiming process was met with complications as address verifications needed to be made for each venue being claimed. Since Foursquare only accepts verification via telephone for United States addresses and email was not an option. Hence, our alternative option was to verify our venues by snail mail. This process took approximately one month to complete.

The second author claimed all 6 venues corresponding to all 6 library venues in the Kent Ridge Campus and duplicate venues were reported to Foursquare. Once all the venues were claimed, the library had to decide on the type of special to offer and the prizes, deals or benefits to offer.

Besides offering prizes to the ‘Mayor’, Foursquare offers a variety of specials, see figure 3 below.
Create a new special by following the steps below.

1. What type of special do you want to run?

- **Attract new customers**
  - **Swarm Special**
    - Like, "If 30 people check in at once, get 25 cent wings"
  - **Friends Special**
    - Like, "Check in with 3 friends and get a free dessert"
  - **Flash Special**
    - Like, "The first 10 people that check in after 8pm get 25% off their order"
  - **Newbie Special**
    - Like, "Get a free cupcake on your first check-in"
  - **Check-in Special**
    - Like, "Get a free appetizer when you check in"

- **Reward existing customers**
  - **Loyalty Special**
    - Like, "Get a free cookie every 3rd check-in"
  - **Mayor Special**
    - Like, "Mayor gets 20% off their entire bill"

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Figure 3: Types of Special you can offer

As we were unsure which Specials would be most effective, several were tried.

<table>
<thead>
<tr>
<th>Venue</th>
<th>Type of Special</th>
<th>Deal/Benefit</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUS Central Library</td>
<td>Mayorship</td>
<td>$40 book voucher to Mayor as of 10 April 2012</td>
<td>Mayor as of 10 April 2012</td>
</tr>
<tr>
<td>NUS Central Library</td>
<td>Flash Special</td>
<td>1st three to check-in received vouchers, the</td>
<td>28 Feb 2012, 1-3pm</td>
</tr>
</tbody>
</table>
Most of the Specials were intuitive to setup and when conditions were met upon check-in, a Special badge would be unlocked and displayed. However, there were some logistic issues encountered and our actions are listed below for interested libraries.

**Loyalty Special at Music Library**

The Music Library attracts students and staff from the Yong Siew Toh Conservatory of Music. The daily walk-in count of the library is fairly stable and consistent which can be partly attributed to the fact that the items have short loan durations. For instance, audio CDs can be loaned out for a period of one week each. Hence, there is constantly a turnaround of students borrowing and returning CDs. To fit the audience type of Music Library, a Loyalty Special was initiated to encourage and reward repeated visits to the library.

The publicity for the Specials was highlighted via posters in the Libraries and virtually through the library’s Facebook and Twitter pages to advertise the promotion. A total of two A3 posters were put up at Music Library to advertise the promotion. In order to heighten awareness of users, an A4 copy of the same poster design was displayed in a poster stand at the loans counter, which was effective because users would have to wait by the loan desk for their CDs or for their items to be checked out.

Briefing the staff at the Music Library about the mechanics of the promotion was the most important part of pre-planning. This is especially crucial as the second author, who is also the Social Media team representative, would only physically be at Music Library once a week. As all NUS Libraries’ staff had attended a social media briefing last year, the concept of “Foursquare” and “checking-in” was not entirely new.

The Foursquare campaign at Music Library was held from 13 Jan to 29 Feb 2012. In order to redeem a small token gift (NUS Libraries stapler), users had to “check in” using the Foursquare application on their smart phones four times during the qualifying period. The contest was open to NUS students and staff only. This is an important qualifier, as the Music Library is also popular with external library members are not from NUS. Users had to show the following screen to officers at the Information Desk in order to redeem their prize.
Newbie Special at Medical Library

In the case of Medical Library, it was a new building that officially opened its doors on 19 Dec 2011. It was felt that this was a good opportunity to pair the opening with a Newbie Special on Foursquare to give an additional reward to new visitors to the building. This also helped to create awareness of the new location of the Medical Library, to facilitate spreading of news of the new Library and to develop social presence for the Library. Once a user ‘checks-in’ to our location, he/she can share with his/her friends of the exact location of the place and add their own comments about the new location e.g. encourage their friends to visit the new Library.

Similar to the music library promotion, staff was briefed in advanced. As it was a new initiative, all the Medical Library staff was briefed on what is Foursquare about and how to identify a successfully unlocked Special screen. An A3 sized poster was placed conspicuously at the entrance of the library to inform the users about the Newbie Special and instructions on how to claim their gifts for the unlocking the Newbie Special.

Flash Special at Central Library and Hon Sui Sen Memorial Library
The Flash Special was chosen for larger sized libraries, as it had the potential to attract a substantial number of check-ins during the peak period – lunch hours. Promotion for the campaign emphasized NUS Libraries’ social media presence. As the exact date of the Flash special at both libraries was not disclosed in advance, publicity was centered on the fact that users were encouraged to follow the library’s Facebook or Twitter pages in order to be notified when the Flash promotion was ongoing.

The campaign was promoted via a range of outlets. Posters were distributed to all seven NUS Libraries and also placed at prominent locations around campus such as canteens and lecture theatres. It was also publicized via the LCD screens at the libraries and are appropriately placed at high traffic locations such as the loans desk and at the library entrance. The campaign was also promoted on the library’s social media channels, the library portal via a web banner, as well as an email circular.

On the Flash Special day, a booth was set up near the entrance of the library. Users would have to check in to receive a Special badge. They would then show the staff manning the booth the Flash badge on their phones in order to claim a prize. The higher value prizes such as vouchers were set aside for the first nine check-ins at each library. During the Flash period, the booth also acted as a “Social Media Booth”, highlighting the presence of NUS Libraries on social media channels such as Facebook, Twitter, and Foursquare. It was also a chance for regular “fans” of the library on Facebook or Twitter to meet the librarians handling the accounts for the first time. Users were surveyed on their views of the library use of Social Media. Noticeably, there were users who were attracted by the posters but were not existing Foursquare users. Hence, these users were guided step by step on how to install Foursquare application on their phones and to check-in on the spot.

**Mayorship special at Central Library**

The Mayorship of a venue is given to the person who has the most number of daily check-ins (multiple check-ins on the same day count only once) for the last 60 days. An announcement was made in early Feb, that the Mayor of Central Library as at 10 April 2012 would receive $40 worth of book vouchers.

A slight issue that surfaced was that we could not turn on the special until 10 April 2012, as we were prepared to give a Special to the Mayor only on that day. Turning it on earlier would result in the Mayor getting a Special every day he or she did a check-in.

**Issues**

As already mentioned, the Foursquare promotion was widely publicized. Among some of the channels used included posting on Facebook, Twitter, print posters in and outside the library, posting in the Universities’ Virtual Learning Environment and even a campus wide mass email as such this meant that the promotion attracted interest from a large number of users who were not already familiar with use of Foursquare. Similarly, the front line library staff needed to be familiar with the concept of using Foursquare to check-in and they were briefed by the authors of this page.
In addition, Frequently Asked Questions (FAQ) was created in the library’s popular Knowledge base LibAnswers and all promotional material pointed to them. They were viewed a total of 400 times by the end of the promotion.

That said by the end of promotion it turned out that there were three main issues staff have to be briefed about. These include

1) How students can install the Foursquare application

2) What do front desk officers need to look out for on the user’s phone screens, to facilitate redemption

3) Possible reasons why users may not be able to check-in successfully

The third in particular, is important as issues such as weak Wi-Fi might prevent check-ins. Another common issue with regards to Foursquare check-ins is that a successful check-in might not unlock a special badge, if the check-in triggers Foursquare’s anti-cheating trigger.

Foursquare has a built-in feature that checks if it is logically possible for someone to check-in at the location he is claiming to. So while one can check-in to a location even if one is dozens of kilometres away, the Foursquare anti-cheating mechanisms will not allow unlocking of the badge. Staff should be aware of this, in order to answer users who are trying to check-in while not within the library.

**Results & Discussion**

Claiming of Foursquare venues allows us to access fairly detailed statistics about check-ins of the venue since it was created. In particular we are able to access daily statistics for

- Number of total daily check-ins
- Number of males and females who check-in
- Number of unlocks of specials
- Number of Foursquare check-ins sent to Facebook or Twitter
- Number of people checking-in between the ages of
  - 13-17
  - 18-24
  - 25-34
  - 35-44
  - 45-54

One often recommended library use of Foursquare is to monitor tips placed by users on your library’s Foursquare venue page. We do that regularly and in the case of the Central Library page, we have a fair number of tips about 40 of them.

We were disappointed to note that claiming a venue does not allow you to delete, moderate, respond to or anyway affect the tips posted by users.

**Total check-ins by Libraries**
<table>
<thead>
<tr>
<th></th>
<th>Central Library</th>
<th>Chinese Library</th>
<th>Hon Sui Sen Memorial Library</th>
<th>Medical Library</th>
<th>Science Library</th>
<th>Music Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2011</td>
<td>370</td>
<td>24</td>
<td>57</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>May 2011</td>
<td>89</td>
<td>0</td>
<td>9</td>
<td>-</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>June 2011</td>
<td>62</td>
<td>0</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>July 2011</td>
<td>63</td>
<td>10</td>
<td>28</td>
<td>-</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aug 2011</td>
<td>314</td>
<td>18</td>
<td>61</td>
<td>-</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>Sept 2011</td>
<td>338</td>
<td>35</td>
<td>81</td>
<td>-</td>
<td>47</td>
<td>1</td>
</tr>
<tr>
<td>Oct 2011</td>
<td>278</td>
<td>23</td>
<td>48</td>
<td>-</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>Nov 2011</td>
<td>195</td>
<td>31</td>
<td>35</td>
<td>1</td>
<td>63</td>
<td>1</td>
</tr>
<tr>
<td>Dec 2011</td>
<td>63</td>
<td>22</td>
<td>23</td>
<td>56</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Jan 2012</td>
<td>238</td>
<td>43</td>
<td>48</td>
<td>92</td>
<td>29</td>
<td>43</td>
</tr>
<tr>
<td>Feb 2012</td>
<td>629</td>
<td>48</td>
<td>91</td>
<td>115</td>
<td>79</td>
<td>49</td>
</tr>
<tr>
<td>Mar 2012</td>
<td>814</td>
<td>55</td>
<td>107</td>
<td>59</td>
<td>54</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3453</strong></td>
<td><strong>309</strong></td>
<td><strong>604</strong></td>
<td><strong>323</strong></td>
<td><strong>385</strong></td>
<td><strong>122</strong></td>
</tr>
</tbody>
</table>

An analysis of check-ins in the last 12 months showed that the Central Library had the majority of check-ins with about **66%** of the check-ins, followed by Hon Sui Sen Memorial Library with about **11%** of the check-ins, and the remaining libraries drawing roughly the same number of check-ins. In any case, these figures slightly under-estimate the number of actual check-ins because in many cases, there are multiple venues of the same location where users were doing check-ins before the official claim.

In addition, there are many sub-venue Foursquare venues that users created to check-in. Spotted sub-venues including a specific floor (e.g. Central Library Level 6), a specific department or room (e.g. Central Library Theatrette) or in one case a rest room! Taking into account of the figures from such venues would increase number of check-ins by about 500.

It is unclear though at this point about how users behave with regards to check-ins. Do they check-in to the main venue and then proceed to check-in to the more specific venue such as Central Library level 6?
The finding that Central Library had the most number of check-ins is not surprising given that it has the largest walk-in traffic. It is somewhat surprising as the other libraries are showing roughly the same numbers of check-ins as the size of the populations they serve are very different.

As all the libraries in NUS (Chinese library data was not available) are access controlled using 3M gates we can compare the walk-ins versus the Foursquare check-ins per month and calculate % of check-ins per walk-in

<table>
<thead>
<tr>
<th></th>
<th>Central Library</th>
<th>Hon Sui Sen Memorial Library</th>
<th>Medical Library</th>
<th>Science Library</th>
<th>Music Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec 2011</td>
<td>0.050</td>
<td>1.659</td>
<td>1.464</td>
<td>0.274</td>
<td>0.075</td>
</tr>
<tr>
<td>Jan 2012</td>
<td>1.105</td>
<td>0.229</td>
<td>0.608</td>
<td>0.148</td>
<td>1.228</td>
</tr>
<tr>
<td>Feb 2012</td>
<td>0.746</td>
<td>0.243</td>
<td>0.587</td>
<td>0.296</td>
<td>1.027</td>
</tr>
<tr>
<td>Mar 2012</td>
<td>0.719</td>
<td>0.242</td>
<td>0.282</td>
<td>0.186</td>
<td>0.371</td>
</tr>
<tr>
<td>Average for 4 months</td>
<td>0.655</td>
<td>0.593</td>
<td>0.735</td>
<td>0.226</td>
<td>0.675</td>
</tr>
</tbody>
</table>

Figure 7: Check-ins as percentage of walk-ins

% of check-ins per walk-in

Prior to Dec 2011, the Medical Library did not exist as a separate building, so no comparisons were possible.

Overall, the percentage of check-ins per walk-in is still very low with the highest being 1.6%. As such is unlikely that Foursquare specials will be able to affect the walk-ins appreciably, more likely they may increase the likelihood of a check-in for users who are already visiting the library.

Taking into account walk-in traffic, we can see that in general Medical Library & Music Library has the highest average check-in rate taking into account walk-ins, followed by Central Library & Hon Sui Sen Memorial Library while Science Library has the lowest.

It must be noted that the success or in the case of Science Library, the lack of specials done might have impacted these figures between Jan and Mar 2012.

Check-ins detailed data – Central Library
In general for Central Library between 13 Dec 2009 to 26 April 2012, there were a total of 5,948 check-ins of which 57% were males and 43% females.

Of the 5,948 check-ins, 41% check-ins were either tweeted or posted on Facebook by users showing that users were generally willing or even eager to advertise their presence in the library to friends using social media platforms.

Of those who used Facebook or Twitter to advertise their check-in 64% used Twitter, and 36% used Facebook. This is interesting given that like most countries Facebook penetration rate in Singapore is much higher than Twitter.

In terms of age breakdown

<table>
<thead>
<tr>
<th>Age</th>
<th>Central Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>13-17</td>
<td>0.6%</td>
</tr>
<tr>
<td>18-24</td>
<td>85.0%</td>
</tr>
<tr>
<td>25-34</td>
<td>11.6%</td>
</tr>
<tr>
<td>35-44</td>
<td>2.5%</td>
</tr>
<tr>
<td>45-55</td>
<td>0.3%</td>
</tr>
<tr>
<td>55+</td>
<td>0%</td>
</tr>
</tbody>
</table>

Figure 8: Age/Gender breakdowns in Central Library

The vast majority of users were between the ages of 18-34, with 85% aged 18-24 and 11.6% aged 25-34. Given the target audience of a University library this statistic isn’t surprising.

As the break-down statistics for the other library venues are not very different from Central Library, no further analysis of this will be done.

How successful were the Foursquare specials?

There are several ways to measure the success of marketing the NUS Libraries’ Foursquare Specials. The most obvious way would be to measure number of “unlocks” ie the number of people who qualified for the specials.

<table>
<thead>
<tr>
<th>Venue</th>
<th>Type of Special</th>
<th>Deal/Benefit</th>
<th>Period</th>
<th>Number of unlocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUS Central Library</td>
<td>Mayorship</td>
<td>$40 book voucher to Mayor as of 10 April 2012</td>
<td>Mayor as of 10 April 2012</td>
<td>Mayor had 59 check-ins out of past 60 days</td>
</tr>
<tr>
<td>NUS Central Library</td>
<td>Flash Special</td>
<td>1st three to check-in received vouchers, the rest received tokens during Flash hour</td>
<td>28 Feb 2012, 1-3pm</td>
<td>50</td>
</tr>
<tr>
<td>Hon Sui Sen Memorial Library</td>
<td>Flash Special</td>
<td>1st three to check-in received vouchers, the rest received tokens during a certain</td>
<td>1 March 2012, 1-3pm</td>
<td>10</td>
</tr>
</tbody>
</table>
The Medical Library's Special had the most number of unlocks - 123, though only 82 claimed the special. This isn’t surprising given that it had the easiest criteria to unlock (compared to the Music Library Special) and was on the longest period (compared to Flash Specials in Central and Hon Sui Sen Memorial Library).

The Mayorship contest at Central Library saw the ‘Mayor’ emerge after doing daily check-ins on 59 out of 60 days, showing true loyalty as this period stretched over weekends and even on one public holiday (where the library was open).

Still, the number of unlocks or in the case of the Mayorship contest, the number of times the Mayor check-ins is not the only measure of success. One question is did the number of check-ins increase as a result of the special?

In the case of the Flash Specials that took place on a day it is pretty simple the answer is yes. For example, the total daily check-in for the Central Library on 28 Feb 2012 was 71 check-ins, the highest ever recorded and it is 65% higher than the next highest ever on 20 March 2012.

Similarly, the Hon Sui Sen Memorial recorded the highest number of daily check-ins of 17 on the day of the Flash Special compared to the highest number recorded of 5 before that.

With regards to the period of the Mayorship contest in Central Library from 10 Feb to 10 April 2012 there were 1,472 check-ins and this was 85% higher than the same period last year. While some of this can be accounted by increased popularity of Foursquare and slightly increased user population this is unlikely to be the full explanation as a comparison of Jan to Mar for years 2011 and 2012 and Jun to Dec for years 2010 and 2011 shows only 44% and 61% increase respectively.

For Music library, there was a clear increase in number of check-ins, with a total of 83 check-ins during the 48 day period 13 Jan – 29 Feb 2012 compared to an insignificant number (6) during the same period in 2011. Incidentally the number of check-ins for the 48 day period before the special started was also 6. This shows that prior to the special at Music Library, usage of check-ins at that location was nearly non-existent.

Interestingly, the number of check-ins for the next 48 days after the special end falls but still remains higher than before the Special with 21 check-ins.

Another way to see the effect of the special is to consider Figure 7. It shows that the % of check-ins per walk-in are significantly higher in Music Library in Jan and Feb 2012 when the special was in effect compared to before and after in Dec 2011 and March 2012.
In the case of the Newbie Special at the Medical Library as that is a new venue we don’t have past check-ins to compare against. However as shown in Figure 7 again, for the months covered by the special from Dec to Feb, the percentage of check-ins per walk-in were more than twice that of March although a portion of that figure could be attributed to the fact that the Medical library building was still new.

**Conclusion & Future directions**

Overall, the results show that while Foursquare specials were generally successful in increasing the number of check-ins, it was unlikely to affect the number of walk-ins as the vast majority of users were not using Foursquare to check-ins. However the responses to the specials were generally positive, including comments such as

“@NUSLibraries I wished I was in Singapore playing this Foursquare game but I’m on SEP at the moment. Have fun people! :) @songboh"

Claudio Chock

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**People Who Shared This**

- **Raymond Lau**
  - LOL NUS Libraries is awesome.
  - Like · Comment · 6 hours ago · 🌟
  - 8 people like this.
  - 1 share

- **Chris Ong**
  - respect+1
  - 6 hours ago · Like

- **Aaron Tan**
  - Awesome!
  - 2 hours ago · Like

Write a comment...
There is some indication that the novelty of manual check-ins might be wearing off (Harbison, 2011), however with development of new geo-fencing apps that would make use of the latest generation smartphone capabilities to automatically check-in and detect events of interest based on the user’s location, this might give location based services a boost.

In particular, Foursquare pages which allow organizations to leave tips coupled with the new Foursquare Radar feature will allow tips and to-do lists to automatically appear on the user’s device once they come within range (FourSquare, 2011c). This could potentially allow libraries to push news based on the location of the user. For example, a user who has signed up to a to-do list created by the library could instantly receive the latest news and events of a library, the moment he steps into the library.

Alternatively, one could also investigate SCVNGR, a location based service used to create orientation games (Vecchione & Mellinger, 2011).
Acknowledgements

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References


Appendix 1: FourSquare campaign posters
First-Time “NUS Medical Library” Check-ins on foursquare get a gift from us!

1. Download Foursquare app into your smartphone and search for “NUS Medical Library”.

2. Check in for the 1st time to unlock the Newbie Special and redeem your gift!

Check-in 4 times on foursquare to NUS Music Library
Unlock the loyalty special to redeem a gift from us!

* Promotion period is 20 Jan to 31 Feb 2013.
* Limited to NUS students and staff only.

Check-in at Central Library or Hon Sui Sen Memorial Library on foursquare during our Mystery Hour* and stand to win Kinokuniya vouchers!
* (Timing to be announced on Twitter & Facebook!)

PLUS! Claim Mayorship on Foursquare at Central Library, and win prizes!

Check-in over repeated visits to Central Library, from 10:00 - 10:04.
The top three users who checked in the most times will win Kinokuniya vouchers and more!

Foursquare Mystery Hour @ NUS Libraries:
Date: 28 Feb, Tuesday
Time: ???
Place: somewhere in Central Library

Date: 1 Mar, Thurs
Time: ???
Place: somewhere in Hon Sui Sen Memorial Library

scan this QR code on your smartphone for more information:
or, visit http://bit.ly/4sqfsaq

Context is open to NUS staff & students only. NUS Libraries staff are not eligible to participate.

Appendix 2: Additional FourSquare publicity
Take the Taylor & Francis Challenge and stand a chance to win an iPad 2!

Using Taylor & Francis Online via the library catalogue, simply answer 5 questions related to article searching and be entered into a lucky draw for an iPad 2! Quiz ends Feb 29th 2012.

**Start the Quiz**

There are 2 forms of madness currently brewing:

1. **Claim Mayorship of Central Library on FourSquare**
   Check-in daily to NUS Central Library on FourSquare between 10 Feb and 10 April and be crowned Mayor on 10 April to win attractive prizes!

2. **FourSquare Mystery Hour @NUSLibraries**
   Check in at Central Library (Feb 28) or Hon Sui Sen Memorial Library (Mar 1) on FourSquare during our mystery hour to win prizes! The timing will be announced on Twitter & Facebook.

**More details here**

Mass E-Mailer sent to all NUS students and staff