2018

GC Collab User Profile Analysis

FROM PRELIMINARY RESEARCH TO DESIGN

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One of the first steps of the GCTools rebrand, is creating profile as a service. This will include a single sign on for every application, as well as host information that will be used for the staff Directory and the Career Marketplace. In order to make the new profile service as user friendly as possible, the following research was done to learn how members were using site and how it connected to their use of the profile.

16,834 profiles from GCCollab were used in this study. A scoring system was created to analysis how complete a profile was. 10 profile features were assessed on a binary scale, and graded as either "Complete" or "Not Complete". This score was then averaged to create a "Profile Completeness" score. For example, a Profile Completeness score of 70, corresponds to 7 of 10 features filled out. The number of wire posts, and groups each person is a part of were also counted to get an idea of how active each person is on the website. These two website features were chosen because it is believed that these are the most population features for facilitating collaboration, and they will be prominent in the redesign.

It is expected that people with higher profile completeness scores will also have more posts on The Wire, and will be members in more groups. To test these hypotheses, the average completeness of each profile feature was calculated and three correlations were done.

Profile Completeness scores range from 20%-100%. No score could be below 20%, as two of the scored features are required by the registration (Email Address and Groups). One user was able to remove their email, however they filled in other profile features. The average profile had a Profile Completeness score of 34.23%. The vast majority of users had made 0 Wire posts and were part of one Group. The average user was a member of 2.4 groups, and made an average of 0.13 Wire posts.

Figure 1 displays the average completeness score for each of the 10 profile features analyzed, as well as the overall profile completeness score average. 99.99% of people included their email address on their profile, and were apart of at least one group. Both categories are mandatory, so the near perfect completion rate is not surprising. Following Email and Groups, Skills (23.49%) and Department/School (23.46%) were the most complete.

The least popular features were the Education and the Work Experience sections, with 15.49% and 13.35% completeness respectively. It is thought that because these sections appear on many other social media platforms (most notably, LinkedIn) members are resistant to fill all the information out again. This may be deterring users from completing the section. The majority of profile features were filled in by less than 25% of members. This is likely because a vast majority of users have profiles, but are not active on the site. It could also be that those members who are active have no interest in completing their profile, as it does not impact their use of the site.

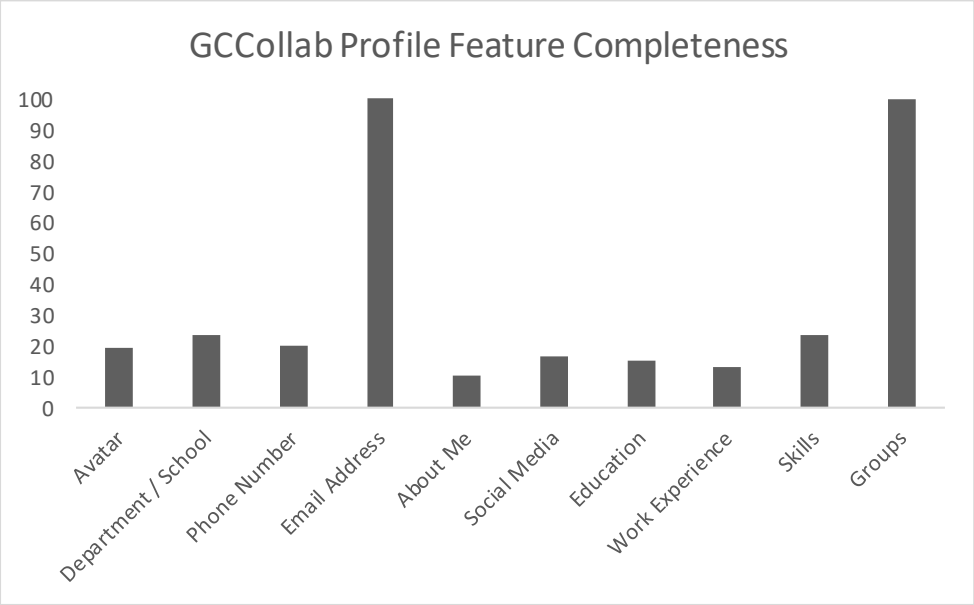

Figure 1. Bar graph showing the average amount each profile feature was completed.

Figure 2 shows the correlation between the number of wire posts made by each user and how many groups they were a part of. The graph shows that while the average person makes no wire posts and is a part of very few groups, there is a population of users who are a part of ~30 groups make anywhere from 10-20 Wire posts. While there are outliers in both directions (people part of more groups with very few Wire posts and people part of less groups with many Wire posts), there may be a ceiling effect for this correlation. If this is the case, research should be done to understand how to better motivate users to make more posts and join more groups, if this is the most efficient and ideal way to collaborate.

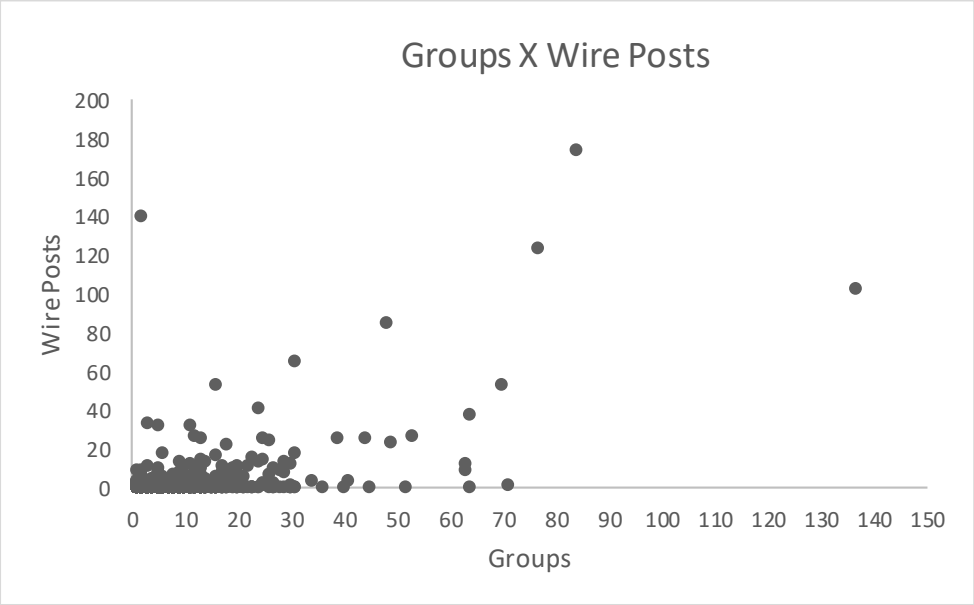

Figure 2. Scatterplot showing the correlation between the number of wire posts made and the number of groups each person was a part of.

Figure 3 shows the correlation between the number of wire posts made by each user and their Profile Completeness score. It appears that profiles that are between 20%-60% complete hover around 15 Wire posts. At a Profile Completeness score of 70%-100% the amount of Wire posts seems to increase exponentially. Unfortunately it is difficult to tell the exact dispersion of this range, and whether or not many of the data points are outliers. Regardless, there is a trend towards people with more complete profiles making more wire posts, but the significance is unclear. The correlation does not imply that making more Wire posts makes individuals more motivated to have a complete profile, or vice versa, it simply suggests that the people more likely to make more Wire posts are also more likely to have higher Profile Completeness scores.

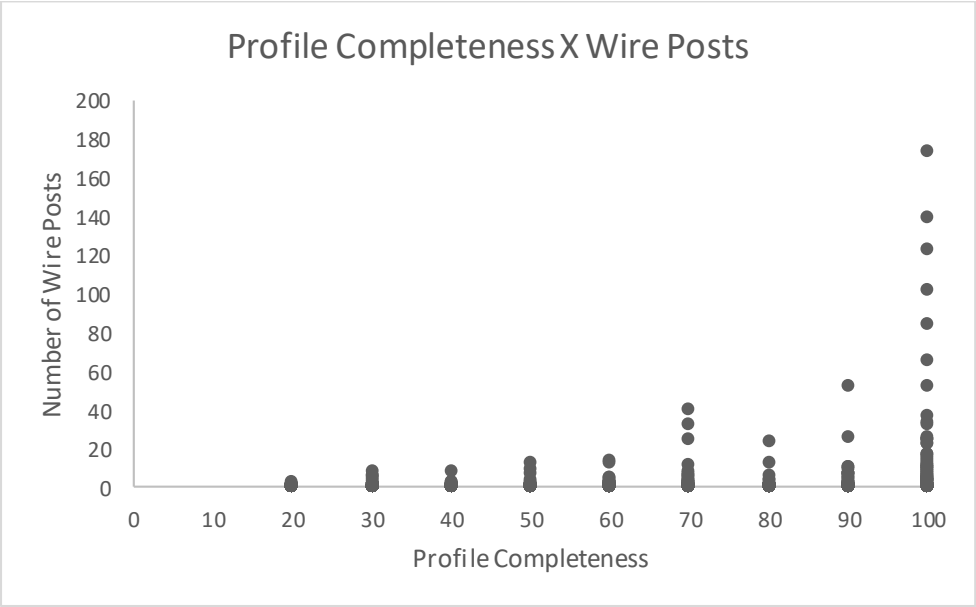

Figure 3. Percentage of profile complete by how many wire posts have been made.

The final correlation was between the number of groups a person is in by their Profile Completeness score (Figure 4). There is a trend towards people with more complete profiles being a part of more groups, however it is unlikely that this trend has any statistical significance. While we cannot speak to how active they are in those groups, it is an interesting trend. This data may suggest that being in many groups motivates people to complete their profile, so fellow group members can learn more about them.

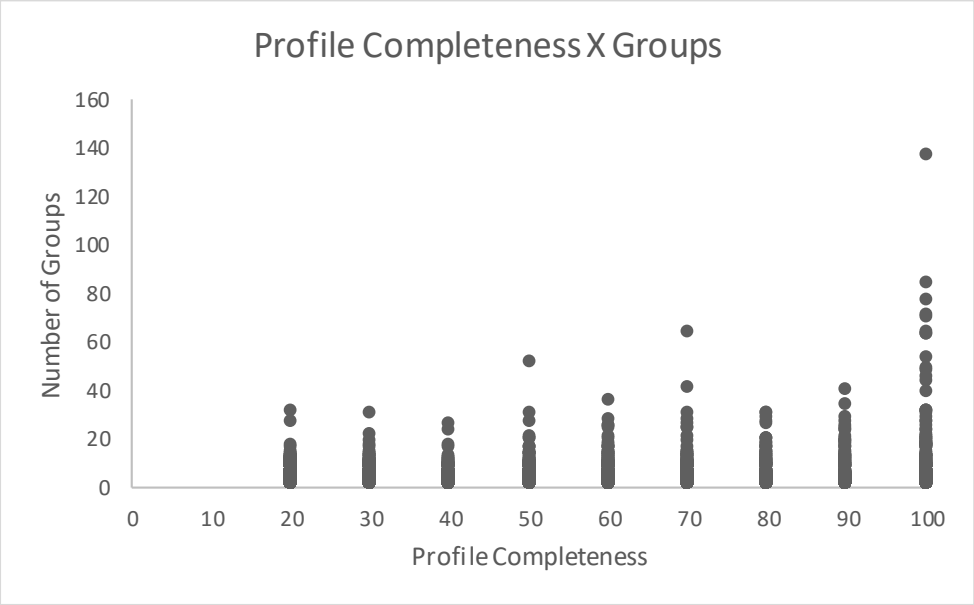

Figure 4. Scatterplot displaying the number of groups each person has joined correlated with their Profile Completeness score.

None of the hypotheses were statistically proven in this study. There was no connection between Profile Completeness scores, the number of Wire posts and the amount of groups each person was in. There was a slight correlation between the number of Wire posts and the Profile Completeness score, but the reason for this correlation remains unclear. This research will help inform the redesign of the profile as a service project. Upcoming sections will investigate why users are motivated to have a higher profile completeness, or why they lack the motivation to complete their profile. In the next section, this data will be correlated with an analysis on the external social media profiles of a select group of users. It is expected that there will be a correlation between some external social media profiles and the profiles on GCCollab.

External Social Media

In order to understand how users perceive the GC Collab profile in relation to external social media accounts, GC Collab profiles were compared with those of LinkedIn, Facebook and Twitter. These external social media platforms were chosen because GC Collab is based heavily on a combination of features from the three platforms. 40 profiles from GC Collab were chosen to be part of the analysis because they were recently active. Of these 40 users, 34 had LinkedIn profiles, 21 had located Facebook profiles, and 24 had Twitter accounts.

Each social media profile was analysed and a separate scoring system created. Each scoring system was based on information which was relevant to complete and active profiles or could be connected to a feature on the GC Collab profile. For LinkedIn this included: Photo, Job, Location, Education, About Me section, Activity, Experience, Skills and Endorsements, Accomplishments, and Interests. For Facebook the included features were: Photos, Location, Education, and Life Events. For Twitter the features were: a Picture, Bio, Link to a personal website, and Location. LinkedIn had a profile completeness score out of 10 sections, Facebook was judged from four sections, and Twitter's score included four sections.

It is expected that LinkedIn will have the highest crossover with GC Collab as it is also a website for professional networking. While Facebook and Twitter influenced the GC Collab design, their core purpose is

different, and only select features were included in GC Collab. It is expected that they will have less crossover with the GC Collab profile.

LinkedIn

Figure 5 shows the completion rate for each LinkedIn profile feature. The features most often filled out included Job (34%), Education (34%) and Location (29%). The least used features were Activity (21%) and Interests (23%). This data suggests that LinkedIn is primarily used for professional activities, and therefore users are less inclined to include personal details and actively engage with content on the site.

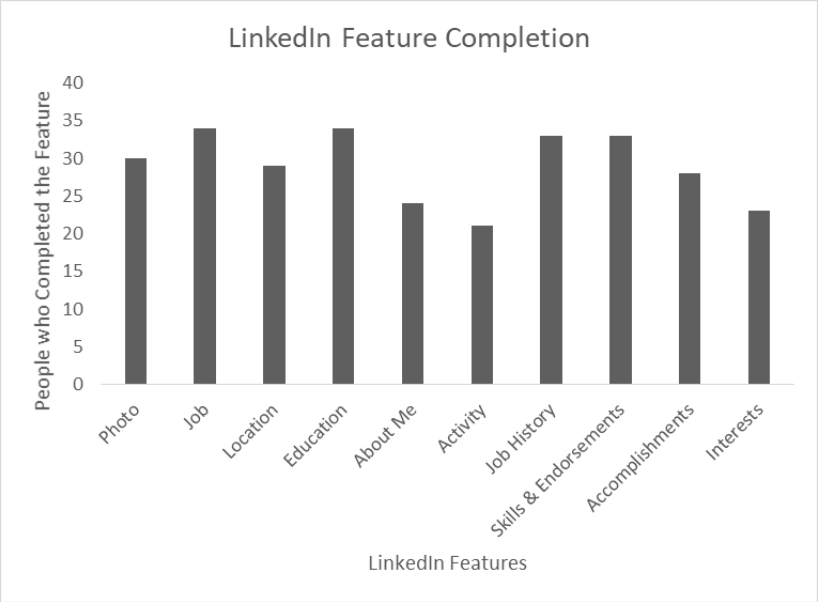

Figure 5. Bar graph indicating the frequency that each LinkedIn profile feature was completed.

Of the GC Collab users, the average Profile Completeness score was 68%. Among users with both GC Collab profiles and LinkedIn profiles, the average GC Collab Profile Completeness score was 68.72%, while the average LinkedIn Profile Completeness score was 72.05%. While the LinkedIn score is higher, it is not significantly so ($t(38) = -0.576$, $p > 0.05$).

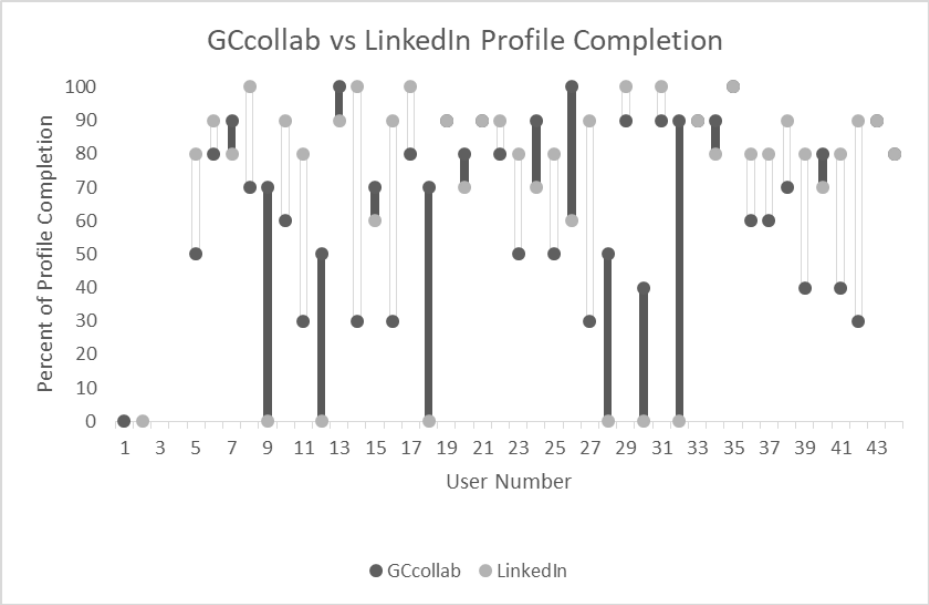

Figure 6. The Up/Down bars of this scatterplot show the relationship between profile completion of GC Collab and LinkedIn for users with profiles on each platform.

It was believed that there would be a strong correlation between LinkedIn and GC Collab profile completeness as they model the same professional networking framework, however this was disproven. There is very little correlation between the two platform profiles. As seen in Figure 6, while many users had both accounts, very few users completely filled out both profiles. While potentially not a deliberate prioritization of one platform over another, it appears that users would often complete one of the profiles but not the other to the same extent. More research would need to be done to explain the motivations behind choosing one or the other.

Facebook

Analyzing Facebook profiles proved difficult as many users have strong privacy settings or do not use their full name. The four features chosen for the Profile Completeness score were available to view even with extreme privacy settings. Figure 7 shows that despite the limited criteria chosen for the Facebook profile, most users still had stronger GC Collab profiles. The average GC Collab Profile Completeness score was 68.5%, while the average Facebook Profile Completeness score was 57.5%. While the GC Collab score is higher, it is not significantly so ($t(19) = 1.669$, $p > 0.05$).

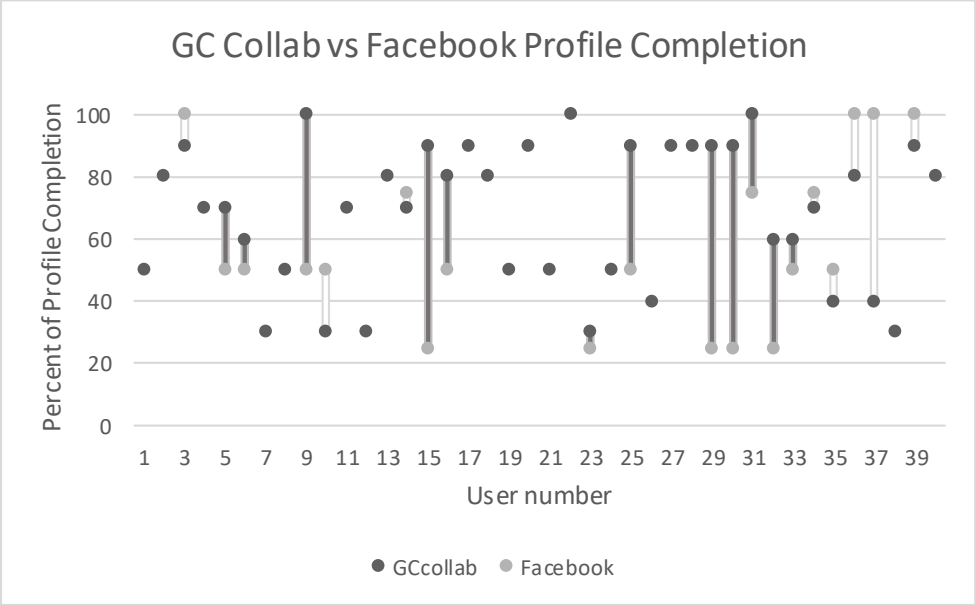

Figure 7. The Up/Down bars of this scatterplot show GC Collab profiles were found to be filled out to a higher degree of completion than Facebook profiles.

As expected, there is not a large correlation between GC Collab profiles and Facebook profiles. The lack of a correlation suggests that how complete a user's Facebook profile is, has no relation to how complete their GC Collab profile is.

Twitter

Like Facebook, Twitter profiles were challenging to find and analyse. Users are more likely to have a username that is not their full name on Twitter, and there are advanced privacy settings on the platform. However, there were still 24 users who had both Twitter and GC Collab profiles visible. Among these users, the average GC Collab Profile Completeness score was 75.42%, while the average Twitter Profile Completeness score was 73.96%. While the GC Collab score is higher, it is not significantly so ($t(23) = 0.72$, $p > 0.05$).

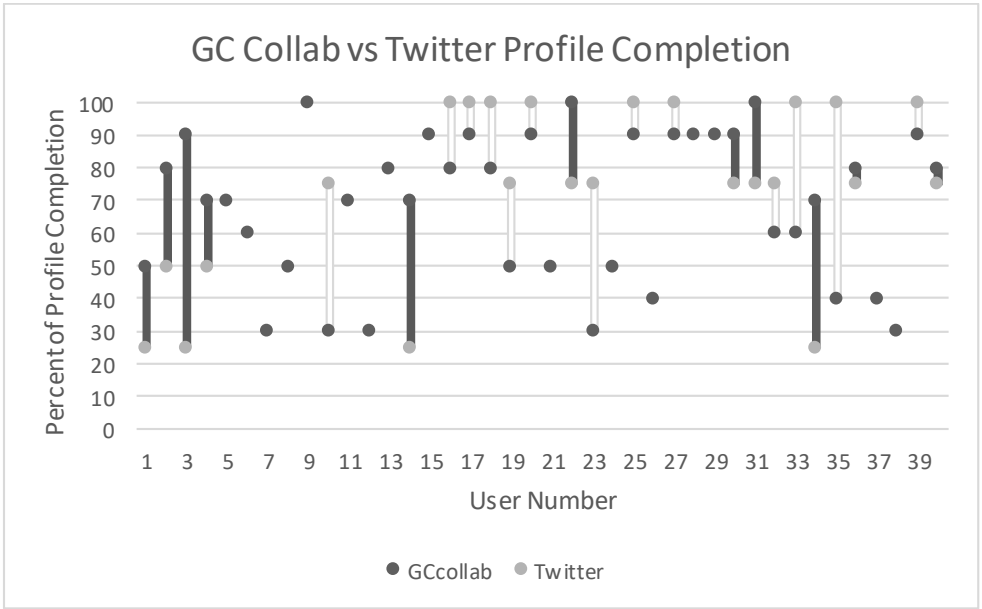

Figure 8. The Up/Down bars of this scatterplot show GC Collab profiles were found to be filled out more completely than Twitter profiles in 54.2% of cases.

This data proves the third hypothesis that Twitter Profile Completeness is not strongly correlated with GC Collab Profile Completeness.

Conclusions

There is no real difference between how filled out all of the profiles are, but there is a slight trend towards users completing LinkedIn and Twitter profiles in a similar way to how they complete their GC Collab profile, while Facebook appears to be less related. This result could be partially explained by Twitter's exclusion of personal details which lends itself to a greater variety of usages, while Facebook's purpose is more fundamentally personal. While GC Collab's profile includes aspects of LinkedIn, Facebook, and Twitter, it appears to draw the most from LinkedIn.

Following the above analyses, semi-structured interviews with current GC Collab users were planned in order to understand motivations for using the profile, perceived value of the profile and usability issues with the current profile.

Interviews

GC Collab was chosen as the main platform for the profile research as the future of the GCTools is to connect public servants with non-government workers and is therefore the more inclusive platform. Currently, GC Connex does not allow any non-government employee to join the platform. GC Collab is not open to the public, but it does allow various non-public servant groups to join, such as students and academics. Users can also send personal invites to individuals they think would benefit from using the platform. This user base is more in line with the direction of the GCTools, and as such, future research will focus on this platform. Users from GC Connex were able to participate in this study, or choose to focus on their GC Connex profile if it is used more frequently than GC Collab.

This interview was proposed as a means of determining why users are not completing their GC Collab profiles, what value they think the profile has, what features they think are unnecessary, what would motivate them to complete their profile on the platform and to collect user stories that can be used in personas. A secondary goal of this study was to gather suggestions to be implemented for the profile redesign.

Hypotheses

While this research is primarily exploratory, there are some expected results. It is expected that the majority of participants will not be able to correctly identify the features included on the GC Collab profile. Based on previous research, we also anticipate that many of the participants will be using the GC Collab profile to interact with Career Marketplace. We are also expecting to gain a better understanding of what features are most important to a profile, as well as the value of a profile, and the motivation behind completing a profile from the view of current users.

Methods

PARTICIPANTS

Interviews were conducted with 16 GC Collab/Connex users. Participants were primarily recruited from the GC Collab group "GC Collab Café". The recruitment message was also posted on the GC Connex group "UX Research Participants", and the GC Collab "Wire". It is expected that this group of people will be diverse in

gender, age range, department and job responsibilities, and be representative of the larger GC Collab/Connex population. An effort was made to have interviews with not only public servants, but external partners, in order to account for the future user base of the platform. To ensure that those groups are represented, individual messages were sent for recruitment. While the medium for recruitment varied, the recruitment message stayed the same.

Structure

Interviews took place over a week-long period. Participants had the ability to complete the interview in English or in French. All interviews were conducted by two members of the UX team, and there were two teams available to run interviews. One member took notes about the participant's answers, while the other administered the interview. At least one team of researchers is fluent in French in order to conduct French interviews. The person administering the interview had a script from which to read, to ensure that all participants received the same instructions. Other members of the UX team were invited to sit in on interviews and take notes, but only the UX researchers were responsible for conducting the interviews. Participants completed the interview in two stages: firstly, a demographic questionnaire, followed by a semi-structured interview. The questionnaire and interview questions were primarily written by the GCTools UX team, however partners for the profile project were consulted, and in some cases provided questions to be added. These questions were relevant to the profile project as a whole, but represent areas of interest for specific partners. The entire process took roughly 30 minutes. To account for late participants, or participants who have feedback that went beyond the time allotted, interviews were booked for 40 minutes.

Procedure

At Office

For participants able to come to the GCTools team office (140 O'Connor, Ottawa), they were greeted in the lobby where they were then signed into the building. Once in the interview room, which was an unused office with a closed door, participants were seated and given a brief synopsis of the purpose of the study, how their data would be used, and informed that they were free to withdraw from the interview at any point if they felt uncomfortable.

Participants received a short questionnaire enquiring about demographic information and their familiarity with the current profile. The questionnaire consists of seven questions and took no more than 5-7 minutes to complete. Following the questionnaire, the interview began. The administrator asked open-ended questions. The interview portion took the remainder of the time slot (approximately 23-25 minutes). For a portion of the interview participants were shown a copy of their profile to use as a reference. Participants completing the interview in person were shown their profile on the administrator's computer. Once the participant answers all the questions, and expressed that they have given all the feedback they could, they are thanked for their time and participation, and shown out.

Out of Office

As the GCTools connect government employees, partners, and students across Canada, and occasionally, the world, some participants were unable to come to the Ottawa office location for the interview. In those cases, the interview took place by phone, or through online conference. Out of office interviews took the same amount of time as the at office interviews (30 minutes). Participants were sent a copy of the questionnaire, in the medium of their choice (email, GC Message, etc.). Participants completed the questionnaire ahead of the interview time, and sent it back to the administrator. For participants who did not complete it in time, the questionnaire was done over the phone. The rest of the interview was conducted as is stated in the *At Office* section, with one researcher

asking questions, and the second taking notes. For questions 8 and 9 participants were asked to view their profile on their computer.

Results

Questionnaire

16 participants (7 male; M_{age} = 44.5 years old) took part in this study, and came from a diverse range of public service backgrounds. Table 1 displays the job title breakdown. While not all participants were working in the private sector at the time of the interview, all 16 participants had some experience working in the public service. The average participant had worked in the public service for 10 years (120 months).

Table 1. Job titles for participants

Job Title	Frequency
Student	1
CEO	1
Engineer	1
Writer	1
Contract	1
Officer	2
Manager	3
Analyst	6

The second half of the questionnaire required participants to identify what features appear on the GC Collab/Connex profile from a list of miscellaneous features. 31 features were provided, and were selected from the GC Collab/Connex profile, Facebook and LinkedIn. Of the 31 features listed, 29 appear on the GC Collab/Connex profile. This question was included to get a better understanding of what features the users are familiar with, and recognize as part of the profile, even if they do not use them. On average, participants were able to identify 60% of features, with the most easily identified being About Me (with 99% of participants selecting it) followed by Department, Phone Number, Email and Work Experience (98%). The least identified feature was Website, with only 31% of participants recognizing it as part of the profile. No hypotheses were made about specific features that would be correctly identified, but the results do support the hypothesis that most users do not know many of the features included on the profile.

Interview

In order to analyse the results from the interview, an affinity diagram session was held. One interview question required participants to list features they would like to see on someone else's profile in order to contact them, and the resulting data was not included in the affinity diagram exercise. The results from this question are displayed in Figure 9. 159 user quotes were selected from the interview and grouped together to identify patterns and trends. The affinity diagram session lasted the span of four days and 10 members of the GCTools team took part in the analysis.

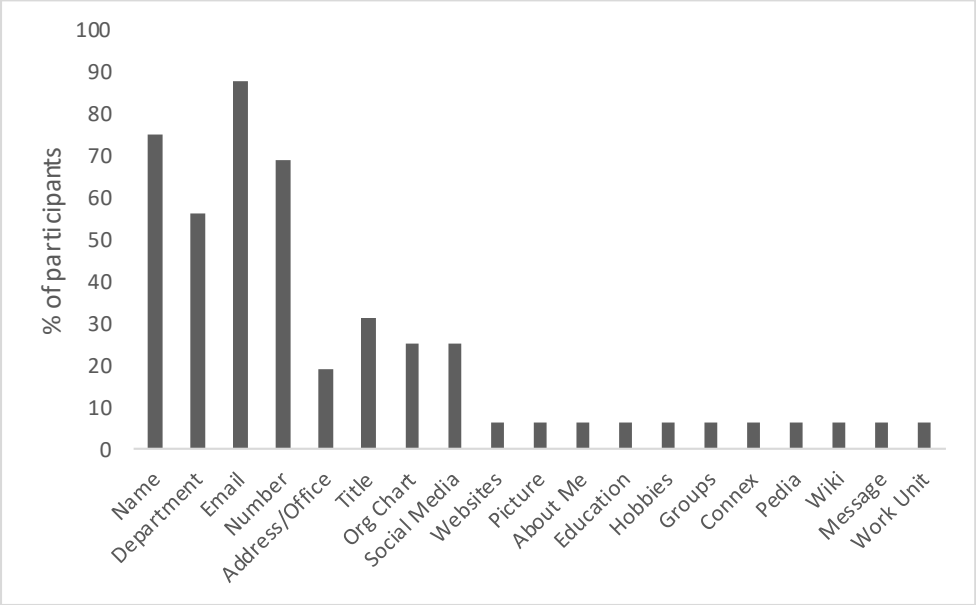

Figure 9. Bar graph displaying the features participants would like to see on someone else's profile.

Quantitative analysis shows that the most important information a profile contains is the users' email address, name, phone number and department. An affinity diagram session was held to analysis the qualitative data. Over the course of this session, five main themes about the profile emerged. These themes reflect user opinions and should be considered when redesigning the profile.

"I want to promote myself"

A subset of participants stated that they used their profile in order to promote themselves. They used it to show who they are, what they are doing with their work, and side projects they are interested in. One participant noted using their profile to display their experience and education as a means of validating their input and opinions when participating in group discussions on the platform (Participant 11). It was also used as a marketing tool (i.e. a method of personal branding) to apply for jobs, or hire new employees. These users view the platform as a serious business tool, and less of a social media platform, but overall as a method of increasing awareness of themselves in a professional manner (Participant 12).

"I have problems using the profile"

Many participants believed that the profile was often too cluttered and hard to navigate. There was also concern that some of the features (specifically About Me and Skills) were too difficult to define and confusing to fill in, requiring more of a cognitive effort, which ultimately led to incomplete profiles. Comments such as "When I think about skills I'm not really sure how to define that. Like computer skills? Communication skills?" (Participant 5) and "My skills are all over the place… it's hard to nail them down" (Participant 16), showed the lack of understanding for the purpose of skills and the reason for including them.

"I don't use my profile"

Participants claimed not to use their profile for one of two major reasons: they felt as though they had no colleagues on the platform and the current user base is only a small portion of the workforce (Participants 1, 9), with Participant 5 saying "I have had people invite me to discussions but right now I'm not finding anybody who

is relevant to what I'm doing". Participants 2 and 3 said they did not see a value in having a profile, with Participant 3 saying "I haven't felt that it would be useful for me at this time and the projects I'm on".

Motivation for having a profile

While some users proactively created and completed their profiles, the majority of participants said they only had a profile in order to complete another goal. There were two main goals identified which led to a participant choosing to create a profile. Firstly, users explained they would create a profile in order to use the GC Collab/Connex platforms (Participants 4, 16). Participant 4 said they had not completed the profile because "I had a certain objective of what I needed [and I] just wanted to get in [to the platform] as quickly as I could to find what I wanted". The second goal of participants was creating a profile to find jobs or new employees (Participants 3, 5, 10). Participant 10 mentioned, "If you want to hire someone, [a profile] is the quickest way to really know the person".

Conditions for profile pictures

Throughout the interviews, participants articulated they preferred when other users had photos as it helps to build trust on the platform (Participants 6, 16), and reinforces that the other user is a real person (Participants 6, 8, 12, 16). Many participants did not care if the picture was a real headshot of the user as long as some effort was made to upload a photo (whether it was a real photo, a cartoon, a pet, etc.) (Participants 8, 12, 15, 16). A user who did not upload a personal picture was described as "lazy" (Participant 13).

Discussion

While participants were only able to correctly identify 60% of features currently available on the profile, the most often identified features were seen to be the most prominent features on the profile, but also some of the most labour-intensive features to complete. The features that were most often remembered are also the ones which were most often seen on GEDS and showed the information required to identify who the user is and how to contact them. These were also the features which participants identified as ones they would like to see on a profile in order to contact a user, showing they are the most important features to include in future iterations of the profile.

Multiple users expressed a lack of knowledge regarding the distinction between the profile itself and the GC Collab/Connex service. This can be seen to be a successful integration of the profile into the overall Collab/Connex service, or a lack of clarity due to an overwhelming number of features provided. There was a lack of understanding of the Collab/Connex platforms, including whether you can apply for jobs directly through Career Marketplace (Participant 14), and whether participants' profiles were on GC Collab or GC Connex (Participants 5, 8, 14, 15).

One of the comments raised in a number of different ways was about being interested in collaborating, but not being able to find value in a profile or participation on GC Collab or Connex because of a lack of members. By not having enough members present and interested in collaborating on a wide range of topics, other members are discouraged from completing their profiles and participating.

Conclusions

In designing the new profile, the above concerns should be addressed. The new design should allow users to easily promote themselves and their work to their colleagues and encourage discussion of ongoing projects. It should also encourage users to upload a profile picture to build trust between users on the platform and trust of the government and public servants as a whole. Addressing these concerns would increase the current value of the profile and encourage more users to complete their profile.

Recommendations

To encourage users to complete their profiles, the profile must be simple, straightforward, and clear about the information it is requesting and the reasons why it wants that information. If it is clear that answering the information will benefit the user in some way, they are more inclined to fill it out. The profile should only request as much information as required to complete the action the user wishes to accomplish.

Reminders sent to the user to prompt them to fill out unfilled sections would also nudge them towards a higher completion rate, as speaking with participants made it clear that they were often unaware they had uncompleted sections left on their profile and were then motivated to fill out more information after the interview. A number of participants updated their profile to include more information in the week following their interview. Finally, the new platform should have an easily navigable, intuitive design.

Personas

From the user interviews, six personas were made to represent user perspectives while continuing work on the project. The personas included three personality traits, a relevant quote from a user, profession, location, goals, frustrations, social media, profile completion score, attitudes surround profile and career advancement, as well as some basic demographic information (age, family status, and time spent in government). Each persona also has a short biography written using real data taken from the user interviews in order to truly reflect the users' views and eliminate any researcher/designer bias.

Design

While research was being done, preliminary designs were made of potential new profiles. Figures 10a-c shows three views of a potential profile design, including a user's activity, background information and further information. These hand sketches were made following one of the initial brainstorming sessions.

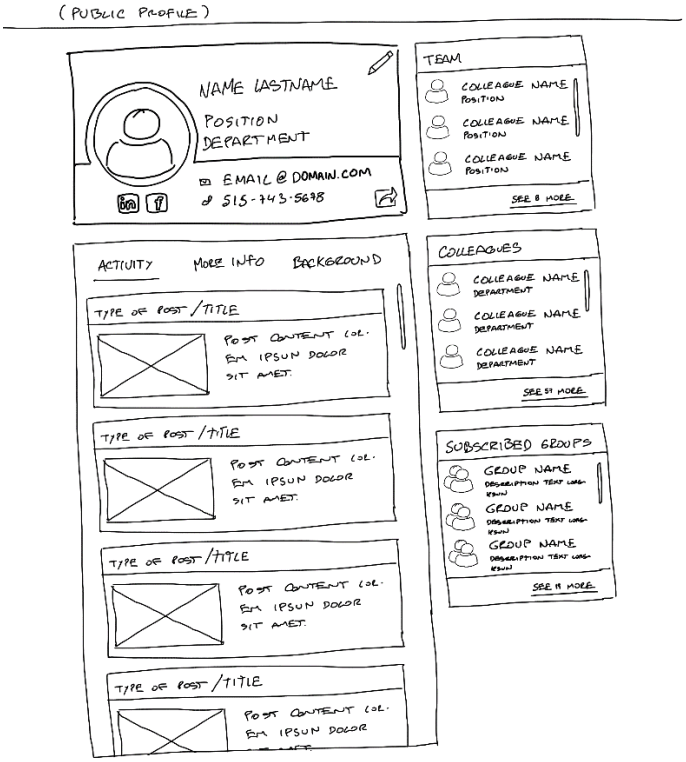

Figure 10a. View of the potential profile 'Activity' page.

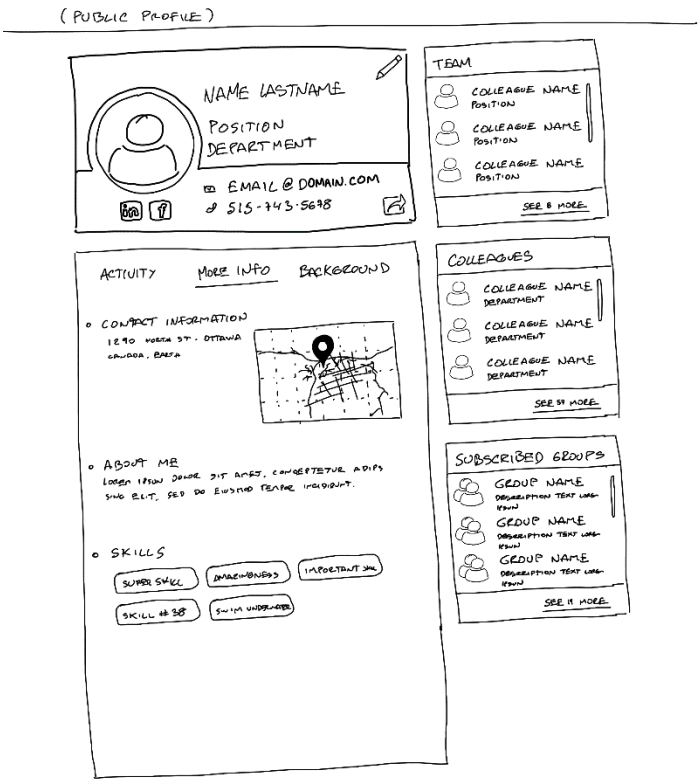

Figure 10b. View of the potential profile 'More Info' page.

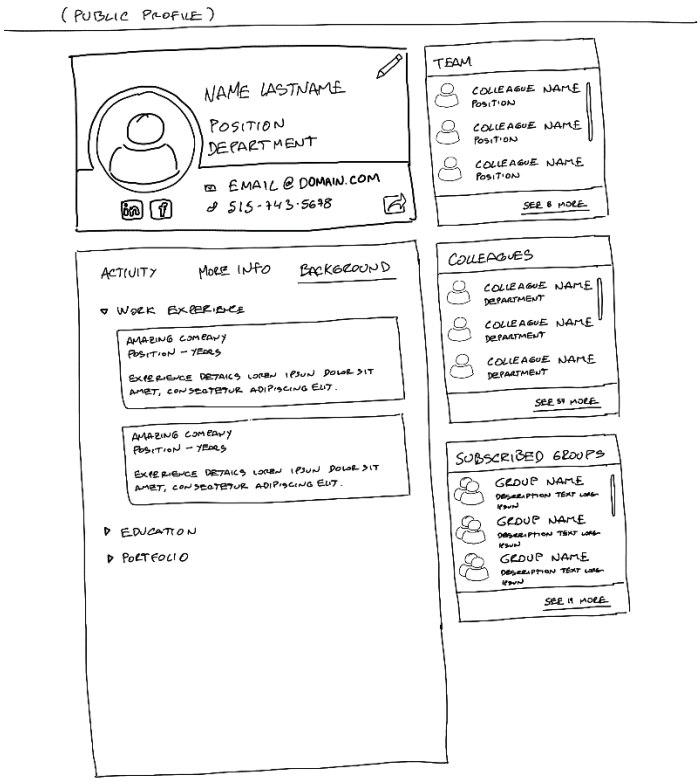

Figure 10c. View of the potential profile 'Background' page.

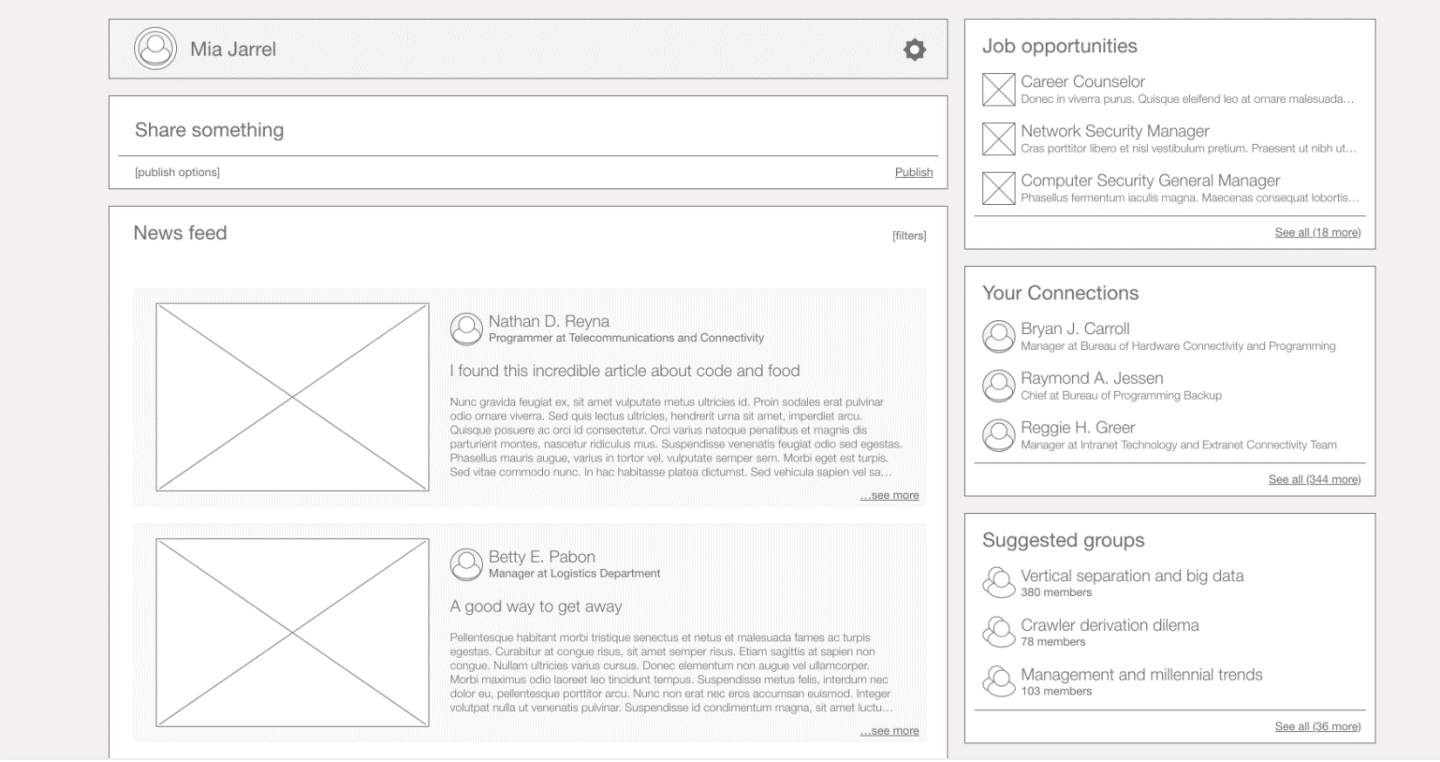

Figure 11. Interactive profile wireframe.

Conclusions

These sketches were then made into an interactive wireframe using Adobe XD, incorporating some basic colour schemes and various ideas surrounding profile (seen in Figure 11). Following these designs, the direction of the Profile as a Service changed, and a decision was made to adjust the scale of the new service.

Final Conclusions

Ultimately, these designs and much of the research ended up being outside the new scope of the MVP. The research and designs will be used in the future when the Profile is revisited and expanded upon. New designs and prototypes will be able to take advantage of the work presented here in order to improve the service and build a system with the users in mind.