



Team

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Problem and Solution Overview

Homelessness is a huge problem in the United States, as well as around the world. A bigger problem, however, is the negative stigma that homeless people face. The stigma, both external as well as internal, can cause homeless people to become unmotivated, desperate, and hopeless. Although a striking majority of homeless people want to get back on their feet and become employed, the negative stigma destroys their confidence and aspirations, and without confidence, the other hurdles that homeless people face while trying to become employed are impossible to overcome. Due to the lack of a proper support system to keep encouraging them, homeless people struggle to find a way to stay confident while searching for employment. Our challenge is to create a design solution that helps homeless people seeking employment to overcome their lack of confidence and become motivated to keep looking for jobs. Our solution involves touch screen monitor in a library, an important location and resource for homeless people, with SMS text messaging capabilities. Our design would aim to help with homeless people's lack of confidence by allowing them to read success stories of other employed and previously homeless people, letting them know that there are people with similar backgrounds that have succeeded in becoming employed; it would also allow for homeless people struggling to gain confidence while looking for jobs to become connected with mentors that have gone through similar experiences.

Design Research Goals, Stakeholders, and Participants

Goals + Stakeholders

We conducted 2 interviews + directed storytelling, observing homeless people in their environment and then approaching them for questions afterwards. We chose homeless people to interview in order to understand what personal struggles they go through, as well as to understand which problem space surrounding unemployment would be the best to address in our final design solution. In addition, we interviewed 2 more people, each person either having a job that involves helping with the hiring process at a certain company or helping homeless people find more resources at shelters and charities. We interviewed these people with the intent of learning more about legal, physical, and emotional barriers between a homeless person and employment, again to understand which of those are most important and hard to overcome. Initially in our research phase, we thought stakeholders could include homeless people, employers, and people working in shelters and nonprofit organizations, but our focus shifted after considering outcomes of research and more of the design process.

Participants

- **Jane** was the HR manager for a mid-size lumber company with over 10 branches in Washington State. We interviewed her to get an insight of what skills & other requirements would be necessary for a homeless person to gain employment at a company of that size, and what legal hurdles the person might need to overcome. Jane has a background in HR, and her daily job includes vetting and hiring people for her company. The environment in which we interviewed her was over the phone.
- **Mike** was a homeless person living on University Way. We conducted both an interview and directed storytelling with him. Aside from asking the normal questions, we prompted him to tell his life story, helping us understand more of his personal struggles and what obstacles he might have to overcome in order to get employed. Mike's background had a long history of homelessness – he's been staying on the Ave for the past 18 years. His environment consisted of him living with some of his other homeless friends on the Ave.
- **Jason** was also a homeless person living on University Way near campus. Again, similar to researching Mike, we conducted an interview and directed storytelling with him. His background was different than the other homeless person we interviewed – he actually had a job at an office, but earned minimum wage, which made it hard for him to find a place to stay. Jason gave us unique insight about the personal struggles faced by homeless people and what they must overcome to even get interviews and eventually get hired.
- **Alice** was a case manager for a local Seattle area women's shelter. Her background included previous community service work and various involvement with helping women in need. The environment we interviewed her in was a shelter with various women coming in and out throughout the day. Alice offered unique insight about how the lack of support system faced by homeless women keep them from trying to better their situations.

Design Research Results and Themes

The most common theme that occurred throughout our interviews and research methods, and a theme that came up again during the design process, was that homeless people want to be employed and want to better their lives. They are willing to work, but are not willing to put in the extraordinary effort it takes to become employed, and want the process to become easier. The numerous hurdles that they must cross seem to be too large for them to think it is worth it to continue trying for employment. These hurdles are diverse and include legal & personal barriers, but the most common problem we found was that the lack of confidence due to a variety of reasons was holding many homeless people back from seeking and gaining employment.

To further explain, we seemed to find throughout all of our interviews that the negative stigma surrounding homeless people was one of the main reasons for a person getting deterred from properly pursuing employment. Because homeless people lack a proper support system, the negative opinions about their identity get in the way of their confidence & motivation. Our interviewee that hired homeless people said that even after getting hired, there was quite some discrimination directed at the homeless person from the other employees. In addition, our homeless interviewees mentioned that a feeling of loneliness was a huge deterrent standing in the way of their confidence and their ability to properly look for employment.

Another problem faced by homeless people that was a theme throughout our interviews was the issue of access to resources that would train homeless people in common skills. The woman at the shelter whom we interviewed mentioned that although internet is accessible in libraries and even at shelters, there are very few training programs designed to help homeless people. In addition, one of the homeless people we interviewed mentioned that with the pace that he learns skills, he would require a special course designed for people like him so that he could properly learn office techniques, and that there were very few programs already existing.

Finally, a theme that we saw was that (much to our surprise) access to technology, healthcare, and other basic resources did not seem to be an issue. Both our homeless interviewees, as well as the person at the shelter, mentioned that homeless people commonly have cell phones and can use internet at shelters, libraries, etc. They also insinuated that they have access to clothing/clean showers/other basic resources because of homeless shelters that already exist.

These findings, along with consideration of themes during the design process, suggested that what would be most useful for homeless people would be a way to give them support and encouragement and a way to ignore the negative bias while they search for jobs, as a method to increase their confidence and motivation. Since their lack of confidence is due to a variety of reasons, some more common than others, we realized that confidence can be increased in many ways as well: by training them in common office skills, improving their resume, providing support groups, and in general, eliminating external and internalized negative bias surrounding homelessness.

Task Analysis Questions

1. Who is going to use the design?

Homeless people, specifically homeless people actively looking for employment, will use our design. A homeless person that is experiencing a lack of confidence and motivation during their employment search would benefit most from our design.

2. What tasks do they now perform?

Currently, homeless people perform a limited number of tasks due to their situation. Tasks currently performed include obtaining clothes from shelters before job interviews, obtaining internet access at a local public library, printing papers for free at a local public library, becoming aware of news and resources by talking with other homeless people in the neighborhood, communicating with family through SMS, and using free Wifi at local cafés and Starbucks to access the internet on a smartphone.

3. What tasks are desired?

The main desired tasks related to the problem space of lack of confidence & unemployment while being homeless are: Reading success stories of other employed homeless people, watching tutorial videos to learn common office skills, and becoming connected with mentors with similar experiences of unemployment and homelessness.

4. How are the tasks learned?

The design should include a very small learning curve and an easy-to-use interface, to make task learning as easy for a homeless person as possible. In addition, the tasks will be learned with the help of currently existing resources being used by homeless people -- libraries and shelters. When homeless people go for other basic necessities to these places, they can also learn about computer interfaces and how to use our design by asking volunteers or by asking their fellow peers. An initial walkthrough of the design will also help the user become familiar with the tasks at a faster pace.

5. Where are the tasks performed?

The desired tasks can be performed in any place with access to internet. Based on our final design, the tasks will be performed in the library. Existing tasks are performed in the library, in the area where the homeless person lives, and anywhere where the homeless person can take a cellphone.

6. What is the relationship between the person and data?

The data is details about stories and personal struggles about previously homeless employed people, as well as their contact details. This includes intimate details about the potential mentors that might be revealed in the stories, as well as their phone number/email. This means that, although the data is not directly related to the homeless user, the relationship between the person and the data should be private and secure.

7. What other tools does the person have?

Tools that the person might already have, according to our interviews, include technology such as standard mobile phones, smartphones and access to internet, as well as computers at libraries, as well as the variety of physical resources and volunteer help at homeless shelters. Homeless people also have tools such as Indeed and other job application websites as tools they could potentially use.

8. How do people communicate with each other?

In general, homeless people communicate with each other by meeting each other at homeless shelters, talking to each other in person, and by email and SMS. Our design could potentially facilitate communication between mentors and homeless people seeking help in order to become more confident and encouraged.

9. How often are the tasks performed?

These tasks are designed to be performed at least weekly, if not daily. It is dependent on the necessity and desire for the person to become employed and overcome their struggles.

10. What are the time constraints on the tasks?

Time constraints for the person depend on how urgently they require the job. The tasks could be replacing the time already spent by the person at libraries, by simply changing channel or medium of information received. In this case, it is not a big time constraint.

11. What happens when things go wrong?

One thing that could go wrong is that the homeless person can stop using the design, blaming the design for not being employed after a period of time. The homeless person could also misuse the contact information of available and potential mentors, leading to the mentor removing themselves from the design.

Proposed Design Sketches, 3x4

Design 1 (figure 1)

Through our research, we found that the primary hurdle in homeless unemployment is the lack of confidence. Our first design focuses on addressing confidence-building by monitoring the homeless person's mental state, and providing short-term solutions intended to be a pick-me-up/confidence boost while the person is looking for employment. It first prompts the user to select which part of the job-hunting process, being homeless, makes them difficult to remain confident. Based on their answers, the design then pulls up the screen that relates most closely to the problem. The design also involves push notifications asking the user if they need a confidence boost for the day. This design accomplishes tasks 2,3,5 and 6 – “Conversing with friends on the street corner”, “Obtaining clothes before job interviews”, “Reading success stories of other employed homeless people”, and “Watching tutorials to learn common office skills”.

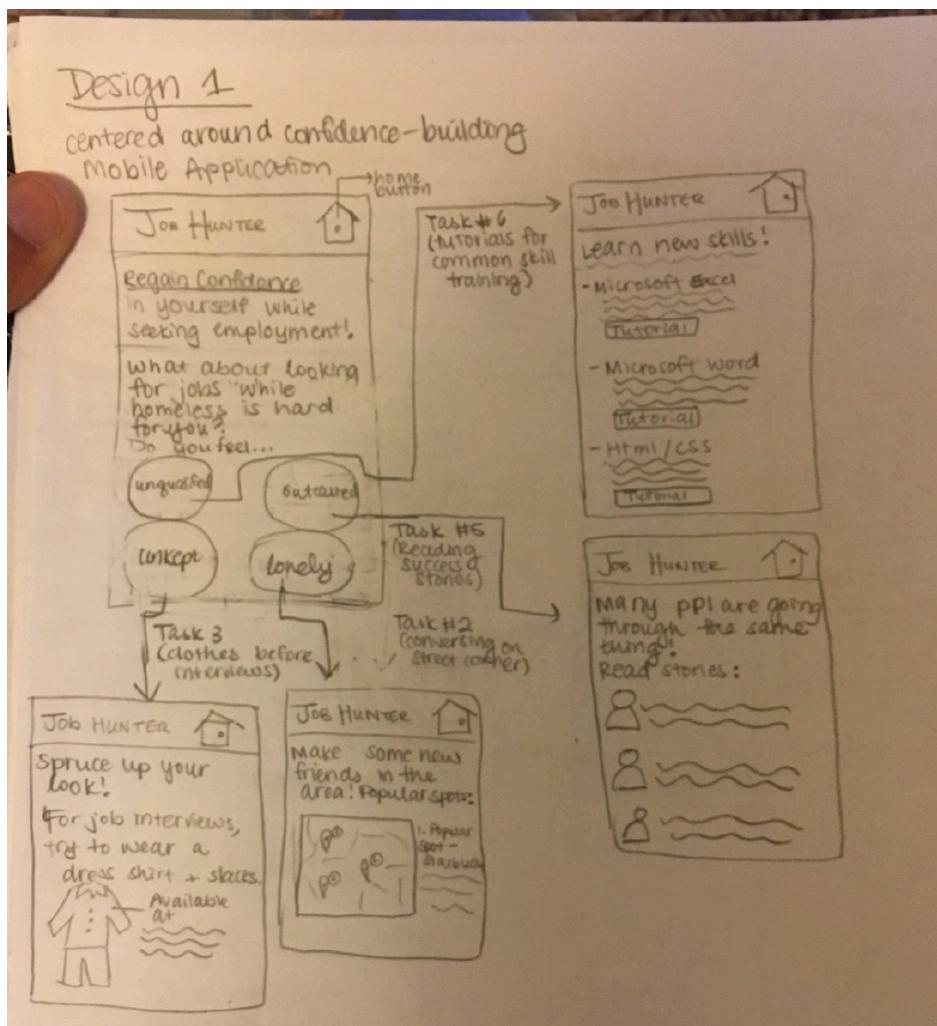


FIGURE 1: OUR FIRST DESIGN

Design 2 (figure 2)

Our second design was based on the fact that homeless people frequently visit the library. Our design was a touch screen bulletin board to be displayed in the library. The design was primarily serving the purpose of connecting the homeless user to a variety of resources, with the idea that with more preparation & access to resources, the homeless person would become more confident while looking for jobs. However, our design was based off of tasks that we decided to revise and remove from our final list of tasks. The tasks accomplished in this design were “Using free internet and printing at libraries”, “Obtaining clothes before job interviews”, “Viewing list of, and applying for, suitable jobs in the area”, and “Watching tutorials to learn common office skills”. After much feedback and going through many iterations while thinking about what we wanted our design to accomplish, we realized that the task of actually applying for jobs was not something we wanted to include in our final list of tasks. This was because we realized that 1) this task does not completely relate to the confidence portion of the job-hunting process for homeless people, and 2) it was hard to include this task and still make the design unique and specific to our target population.

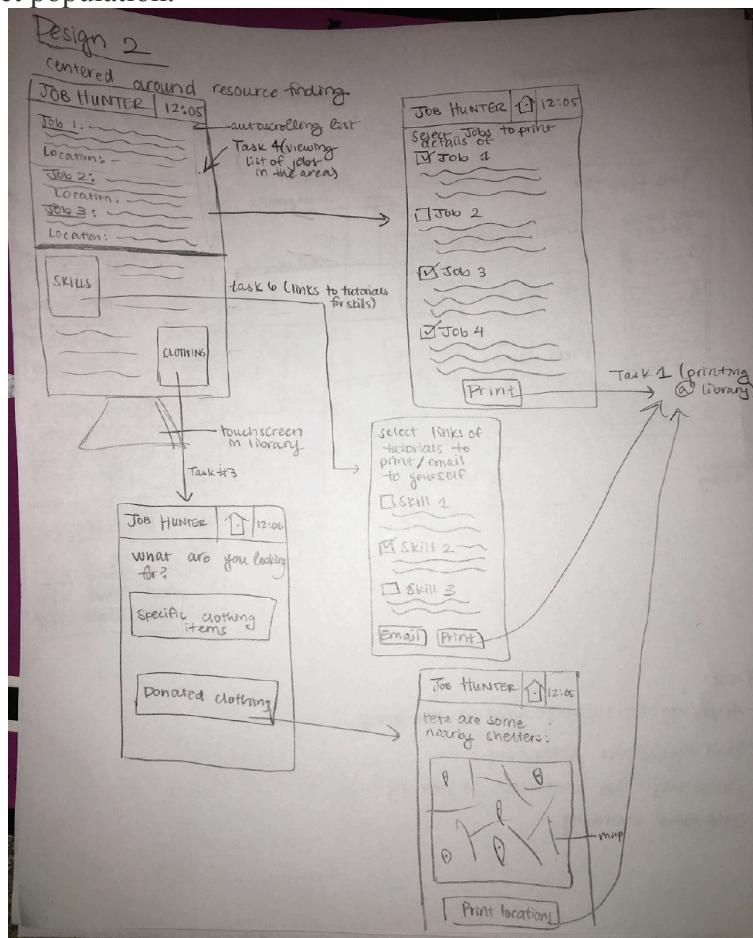


FIGURE 2: OUR SECOND DESIGN

Design 3 (figure 3)

After valuable feedback, we realized that our third design was not a specific-enough design for our problem space and target population. Again, we focused this design around one task—applying for jobs-- that turned out to not be important when considering the main issue of lack of motivation. This design focused on actual job applications for homeless people, featuring an auto-generated resume, easy job application, and more. However, we got very helpful feedback and realized that the tasks accomplished in this design were not all helpful when it came to considering the confidence issue. In addition, we realized that this design could potentially be used by any person, not just a homeless person looking for employment, which is another reason why we revised our task list after getting feedback about this design. The tasks accomplished in this design are “Using free internet and printing at libraries”, “Viewing list of, and applying for, available jobs in the area”, “Reading success stories of other employed homeless people”, and “Watching tutorials to learn common office skills”. The task about viewing & applying for jobs turned out to not fit with our theme.

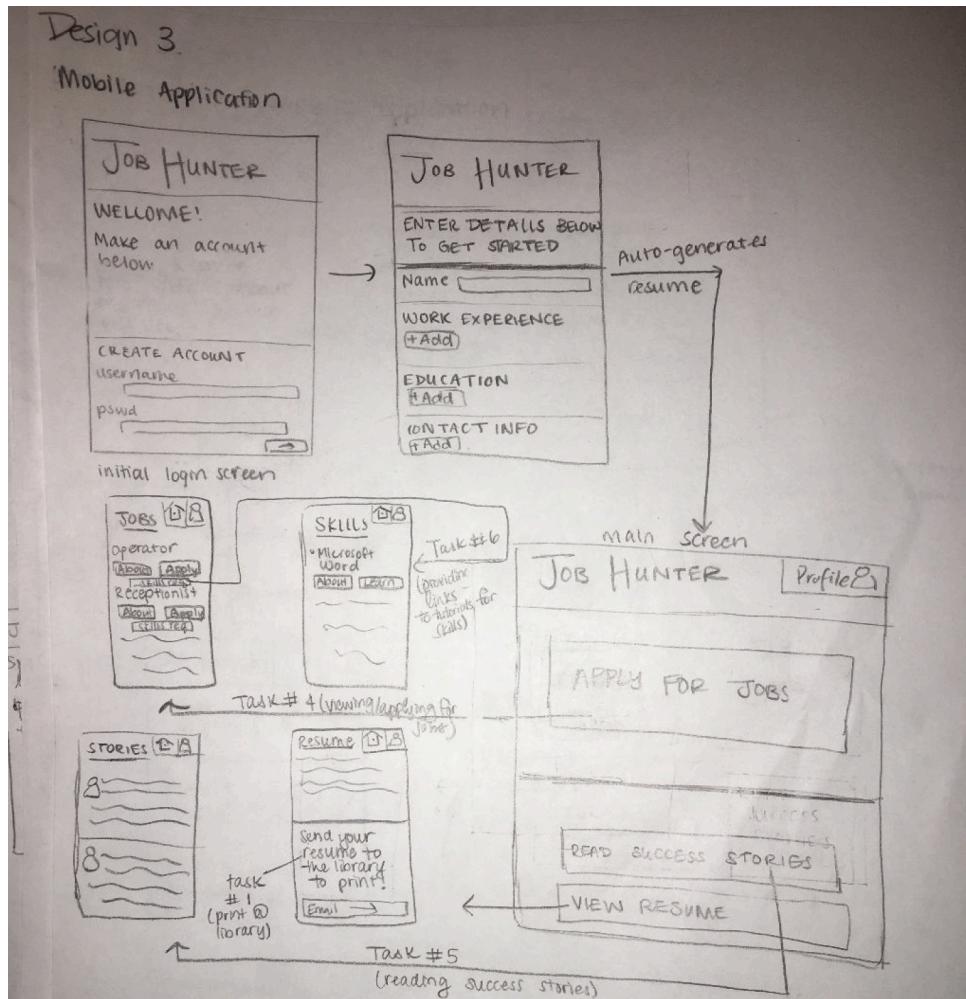


FIGURE 3: OUR THIRD DESIGN

Choice of Design (figure 4)

We chose to base our final design **off of our second**, but changed it quite a bit after receiving and incorporating feedback from our peers and the TA's. Our final design is focused on having a large, multi-user touch screen board at local libraries that homeless people can interact with. This touch screen board, in our design, will have capabilities of sending/receiving SMS text messages to/from phone numbers. Through our research, we had found that the library is a resource that the majority of homeless people use. Since homeless people make regular visits to the library (usually daily), we thought that this design would help serve homeless people better than a plain mobile application, which is what our other two designs were focused around. The two tasks we chose were "**Reading success stories of other employed homeless people**" and "**Becoming connected with mentors with similar experiences of unemployment and homelessness**". The second task was an additional task that was added to our list of tasks after a lot of revision and consideration of the problem space and our target group. We chose these two tasks because, through our research, we had found that the main issue surrounding unemployment with homeless people is lack of confidence and motivation. Though this stems from a variety of sources, our research suggested that human interaction and support groups would be the best way to overcome the lack of confidence for the majority of homeless people looking to get employed. We decided to skip including the task of actually applying for jobs in our final design, since it was hard to make it specific for our user base, and didn't directly address the lack of confidence issue. Our final design revolves around a touch screen displaying stories that can be filtered & searched for (task 1). If the person wishes, they can get in contact with the subject of the story, and once the mentor approves, the touch screen will ask for a phone number and send an SMS message to the homeless person with the contact details of the mentor (task 2).

Design sketch for updated tasks & design idea

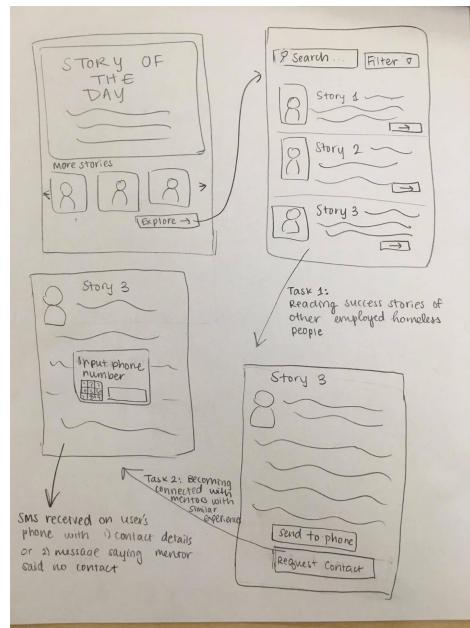


FIGURE 4: OUR REVISED DESIGN

Written Scenarios, 1x2

Task 1: Reading success stories of other employed homeless people

Jim is a homeless person that regularly visits the library. Recently, all of his friends have started to find employment and slowly have started to rebuild their lives, and he wants to follow in their footsteps. However, as Jim is looking for jobs on a library computer, he realizes that there are so many hurdles in the way of him and employment, and he starts to feel terrible about himself, losing all confidence and motivation. He thinks to himself that he is the only one going through these types of struggles, and that no one else has gone through this. As he is about to give up and go back home, he stumbles across the touch screen “Uplift” monitor in the library, noticing a “Story of the Week” that seems interesting. After reading the story of the week, he scrolls through the additional stories displayed on the board, and as he reads more and more of them, he realizes that other people have also been in the same position as him and have eventually succeeded in finding jobs. He realizes that there is hope after all, and with some hard work and inspiration, he can also achieve employment. One story really inspires him, and he wants to be able to read it at his leisure on his mobile phone. Jim clicks on a button to send the story to his phone via SMS, and after putting in his phone number, Jim receives the story in a text message. Now Jim can read the story later, if he ever feels discouraged while looking for jobs, and of course, he can always come back to the library to read more stories and become more inspired.

Task 2: Becoming connected with mentors with similar experiences of unemployment and homelessness

Jimmy is a homeless person that has been lucky enough to find a job interview for a position he is excited about. However, he is unprepared and unconfident about his skills. After a long period of unemployment, he has forgotten what to wear, what to say, and how to behave at interviews. His interview etiquette is not good, and when he doesn't get the job, he realizes that his lack of confidence because of his unpreparedness completely got in the way of him and the job. Determined to get some help, Jimmy goes to the library to use “Uplift”. There, he is able to filter stories based on some keywords, and he searches for stories related to “interview fails”. He hopes to find someone that went through the same struggles with lack of preparedness for interviews as him, and someone that could guide him on how to overcome that. He finds a person's story that completely resonates with him. Wanting the person as a mentor, Jimmy pushes a button to request to contact him, and enters his phone number. After a few minutes, Jimmy gets an SMS message containing the mentor's contact details, saying that the mentor has agreed to talk to him. Now Jimmy is connected to a mentor that has gone through similar interview failures and has overcome those to get employed while being homeless. He can talk to this mentor on his own time and become more prepared and more confident.

Storyboards

Storyboard 1: Reading success stories of other employed homeless people (figure 5)

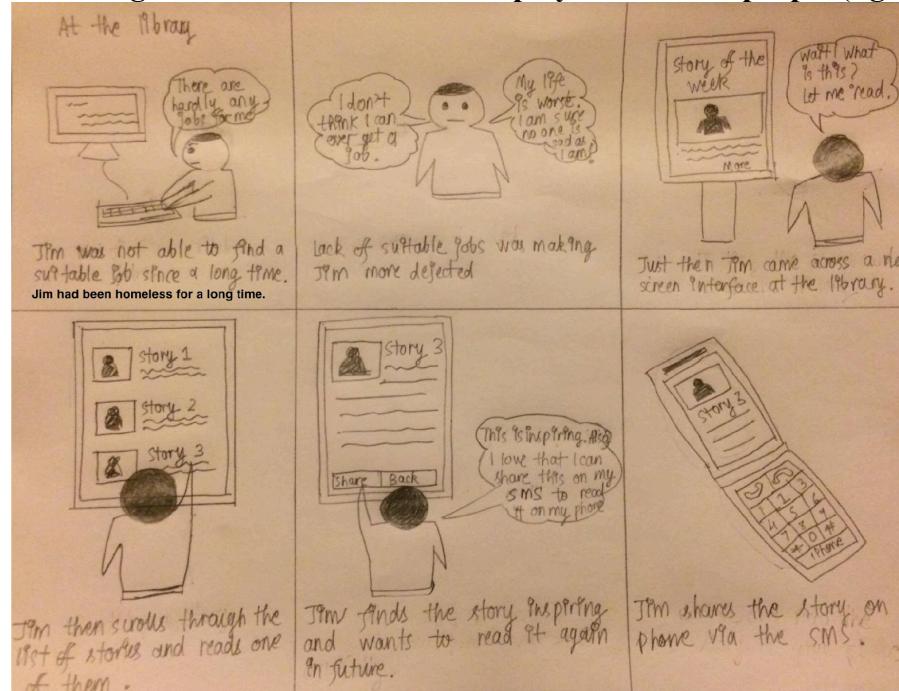


FIGURE 5: STORYBOARD WITH FIRST TASK

Storyboard 2: Becoming connected with mentors with similar experiences of unemployment and homelessness (figure 6)

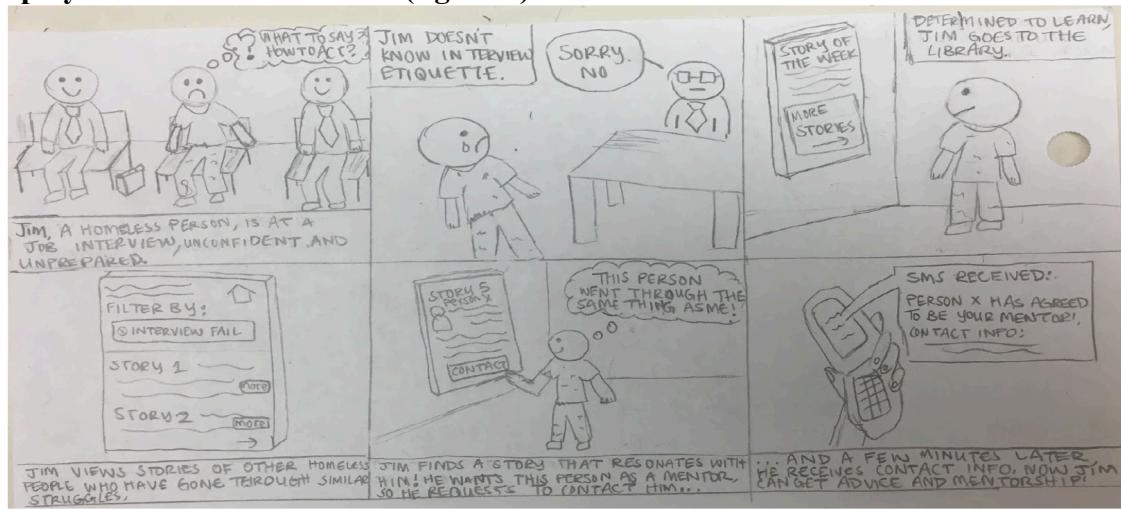


FIGURE 6: STORYBOARD WITH SECOND TASK