

**Freedom Network;
Supporting Citizens Post-Incarceration**

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ABSTRACT

The US prison population has increased by 700% since 1970 and the average cost of maintaining prisoners in prisons is approximately \$31,000+ a year. That is more than we spend on tuition alone. And of the population that leaves prison, 75% will be return within 5 years. Our incling in solving this problem is creating a platform that connects people beginning the re-entering process with mentors who have successfully reintegrated. Our methodology in deciding whether this path was worthwhile and developing this solution involved in-depth literature review paired with interviews and system analysis of existing solutions. Our biggest findings and concerns were around the digital literacy of our target population and a consideration for the support network they could have when leaving prison. With research laid out in detail below, we believe that a proactive, supportive mentoring rehabilitative process is vital to a successful (re)formative identity when returning to society.

INTRODUCTION

The US prison population has increased 700% since 1970 while the population of the entire nation has only increased by approximately 60%. The average cost of an inmate to taxpayers is over \$31,000 annually (Price, 2019). Incarceration disproportionately affects poor and minority populations leaving a legacy of broken families and communities in the wake of skyrocketing rates (Lee et al., 2013; Leverentz, 2010; Walmsley, 2018). A spectrum of problematic governance and inhumane prison conditions plagues the reputation of the institutional corrections system in the United States (Stevenson, 2016). While our research focuses on US prison populations and situations, global incarceration rates are on the rise (BJS, 2016). In 2010, the International Centre for Prison Studies reported more than 11 million people who are active in a federal correctional system globally (Walmsley, 2018). The US Bureau of Justice Statistics (2016) reports that an estimated 6,613,500 people were in the institutional corrections systems

in the US in 2016. There is little evidence supporting the idea that this vast incarceration and penalization system supports the actual rehabilitation of criminals. Over three-quarters of citizens reentering society are rearrested within five years of release (Price, 2019). Not only is unsuccessful rehabilitation a great expense, these systemic issues disrupt and deter the health and well-being of everyone associated with offenders. Mass incarceration has profound and widespread impacts on society (Lee et al., 2013).

Reentry post-incarceration is a particularly precarious time for offenders, their families, and the communities they are returning to (Aresti et al., 2010; Durnescu, 2017; Leverentz, 2010). Through our research and technology development we seek to identify ways technology can be used to support citizens in this process. As a first step, we must understand what the reentry process is like, what needs and risks reentering citizens face, what may promote recidivism, and how desistance may be promoted instead. This research has implications for a variety of organizations and strategies including social services, development of community-based resources, technology development, education, criminal rehabilitation, legislation, and social justice endeavours.

There is a clear lack of government and community resources supporting the societal reentry process - such as housing programs or job training and placement (J. Navedo, online research, February 2019). To address this need, we propose a mentorship program enhanced by a web-based system which not only provides referrals and resources to people post-incarceration, but also provides guidance and robust, relevant support in other ways (Brown & Ross, 2010; Reisdorf & Rikard, 2018). While community resources are sparse, it is also common for reentering individuals to lack a positive community of friends and stable family. Because the development of a new, prosocial identity and lifestyle is absolutely fundamental to desistance, we theorize that a robust mentorship program will increase desistance rates post-incarceration (Aresti et al., 2010; Durnescu, 2017; Rizia et al., 2015). While there are strong

indications supporting this theory in the literature, there is a lack of developed and consistent reentry or mentorship programs and the formerly incarcerated population is underserved and understudied (J. Navedo, online research, February 2019). There is not efficient evidence to fully support our theory. In this way, we open both an avenue of action and of further research.

While some referral lists and programs working with this population do exist, it is rare for them to incorporate technologies beyond simple text and the occasional map. Many reentry programs originate with religious mission programs or social justice initiatives. However, their online presence tends to provide information about the organizations for interested donors. There appears to be a lack in ICT platforms directed toward the general population of reentering individuals post-incarceration (J. Navedo, online research, February 2019). This is a population with significant digital illiteracy rates for reasons briefly explained below (Ogbonnaya-Ogburu et al., 2018; Reisdorf & Rikard, 2018; Rizia et al., 2015). In order for our solution to be accessible for enrollment and use, it is necessary for Freedom Network to be incorporated into a partnering organization which works with reentering populations (S. Simmons, personal communication, 7 February 2019). That organization will develop their own mentorship program based on individual needs within their population, assigning newly released Mentees to appropriate Mentors. This also gives the partnering organization the opportunity to begin training Mentees on how to access and use Freedom Network - a bridge to technological literacy. Because technology can be difficult to access for many upon initial reentry (Ogbonnaya-Ogburu et al., 2018; Reisdorf & Rikard, 2018), we have chosen to focus on web-based technologies that can be easily accessed for free at a local library. Ideally, the Freedom Network Mentor/Mentee chat functionality will be enabled to use mobile text functionality in the future. Truly, the student becomes the master. The Mentor role should serve as a goal for the Mentee group by offering a path to prove growth and promote prosocial behaviors and

community stability (Aresti et al., 2010; Wright et al., 2015).

RELATED WORK

Three distinct categories emerged from our literature review and systems analysis. In each paper read, barriers to successful reentry or rehabilitation were addressed in a variety of ways relevant to the focus of that research. Because *barriers to entry* are a constant theme, they are not considered a separate category of research type but a constant element in the reentry experience.

There is a general lack of ICT solutions directed toward the formerly incarcerated population. Research and development has been slightly more attentive to veteran populations (J. Navedo, online and database research, 26 January 2019). Due to the strong parallels between veteran reentry and reentry post-incarceration, we have expanded our lens to encompass both populations which has gleaned useful insight and innovative ideas. We acknowledge that there are significant differences between the two groups.

Reentry and identity (re)formation

While our research uncovered a variety of specific definitions regarding reentry experience and obstacles, a distinct theme of reentry as a process with distinct stages emerged (Durnescu, 2017). This is further discussed in the four-stage model presented in our findings, below. Reentering citizens not only move through a process in the physical world, needing to secure basic needs and learn to navigate new technologies, they also move through a process which informs their definitions and constrictions in their own identity. It is important that a prosocial identity not defined by a person's past mistakes or behaviors is developed. Rather, this new identity ought be defined by their overcoming of a past story and their empowerment to rewrite their life in new ways. This type of restructuring requires certain types of community support and access to resources. There is evidence that mentorship and supportive networking from family, friends, and relevant programs greatly enables this (re)formation of identity and

successful reentry. We seek to provide technology solutions in both the explicit and implicit process of reentry and identity (re)formation (Aresti et al., 2010; Brown & Ross, 2010; Durnescu, 2017; Leverentz, 2010; Reisdorf & Rikard, 2018; Wright et al., 2015).

Community and rehabilitative support resources

Some programs which advocate and take action to support the rehabilitation of offenders and their successful reentry exist. Notably, Equal Justice Initiative (EJI) and the Anti-Recidivism Coalition provide legal and social services or mentorship programming and community for reentering citizens respectively. However, programs like these are over-taxed or non-existent in a majority of the US (J. Navedo, online research, February 2019; A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). If someone is fortunate enough to live in an area with resources, or meet the criteria for services and catch an organization's attention, these programs and others like them can save the lives of their participants (and their families). However, reentry and desistance is difficult - even with supportive programming.

The research literature is clear about the role of supportive community. While some reentering citizens have supportive families or robust networks of friends, many don't - or the culture they're returning to also promotes recidivism (Aresti et al., 2010; Durnescu, 2017; Leverentz, 2010). For those with community outside, there are a growing number of ICT platforms such as Connect Network and smartjailmail.com (J. Navedo, online research, 30 January 2019) used to communicate electronically with individuals in the institutional corrections system. This leads us to believe that electronically-enabled communications are likely to be a somewhat familiar experience, one accessible after release.

Drug and alcohol treatment programs are a vital component of much needed community resources. Virtual Rehab provides drug and

alcohol treatment through VR technologies. Platforms such as Returning Citizens Resources offer lists of community-based referrals. A prototyped ICT called SPROKIT provides an interactive mobile application which uses gamification to promote prosocial behaviors. However, VR is expensive and difficult to access and use for a low digital literacy population. SPROKIT is clearly more advanced than the user skills indicated in the literature could likely interact with. Interactive maps or lists of resources like Returning Citizens Resources are much more accessible, but still require an understanding of how to navigate internet platforms and access to web-capable technologies - two significant barriers to entry, discussed below. While these solutions seem useful, we must be aware that this population has a unique set of needs and behaviors. How can Freedom Network facilitate digital literacy and accessibility in order to allow our users to overcome these barriers and access resource information reliably?

Rizia et. al. (2015) developed a useful platform to support veterans reentering society. Their users were veterans enrolled in higher education through the GI Bill who were also part of a mentorship program. Their 2015 study serves as model for our mentorship program and chat solution built into Freedom Network.

Digital literacy and use patterns

We read a body of research probing into digital literacy rates and technology use patterns in the reentering citizens populations. Many people entering the institutional corrections system originate in particularly low socioeconomic circumstances (Stevenson, 2016) with notably low education and digital literacy rates (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). After a period of incarceration, digital literacy is exceptionally low. This is a specific barrier we have been sensitive to in our research and solution development approach (Jain, 2004; Ogbonnaya-Ogburu et al. 2018; Reisdorf & Rikard, 2018; Semaan et al., 2016). Semaan et al. (2016) specifically connect digital literacy with

identity awareness in that technology allows users to connect to a “big-picture” world and find their place.

Reentry programs such as EJI’s, which deals with a population often released after death-in-prison sentences are changed or who were children when they entered adult facilities and are released as seniors, offer their participants technology education in the form of modules (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). Basic things like using a touch-screen to checkout at a grocery store are major obstacles for this population. An organization working in-person and able to provide technological training in order for users to successfully access Freedom Network’s platform has emerged as a necessary component in any ICT developed to serve this populations.

American Prison Data Systems and Unloop, a Seattle, WA non-profit, both teach inmates to code in a job skill retraining effort (J. Navedo, online research, February 2019; S. Simmons, personal communication, 7 February 2019). Both programs have excellent provability and are an interesting example of the empowerment inherent in digital literacy.

RESEARCH METHODOLOGY

A predominantly qualitative research methodology was used in our systematic literature review, system analysis, and user interviews. This approach allowed us to understand the needs of the population of reentering citizens we wish to support in their reintegration process, including underlying causes of recidivism and antecedents to successful reentry.

Systematic literature review

Preliminary research was done online, where news articles and government websites associated with institutional corrections systems were combed for emergent themes and clues to relevant keywords to use in a data search. The following keywords were sorted into two categories (*technology* and *user*) and the following keywords were identified: *user*: reentry,

recidivism, anti-recidivism, rehabilitation, desistance, post-incarceration, formerly incarcerated, prisoners, felon, barriers, support, community, social services, identity, ontological wellbeing, ontology, identity formation, rite of passage; *technology*: ICT, web-based, application, technology, digital literacy, websites, email, phone app, mobile app. Upon discovering a lack in relevant research specific to our target population, we expanded our search to include a third tertiary category (*veterans*) which we then identified the following keywords for: veteran, military, vets, VA, mental health, PTSD, civilian life.

These keywords were then used in various combinations to search in Google Scholar, Academic Search Complete, AMC Digital Library, and PsyInfo. Abstracts to all results were read and a total of twenty five papers were identified as meeting our search criteria. In order to be selected, papers had to be: (1) published within the last 10 years, (2) focus explicitly on formerly incarcerated citizens or veterans, (3) explore reentry services or programs, (4) identify implicit dynamics in successful reintegration including the role of community and relationships within a developed Western cultural context, and (5) identify barriers. Though there were few, some papers which discussed (6) ICTs or other technologies which were directed toward veteran or post-incarceration populations were found and designated for review.

Of these twenty five papers, eleven were selected by our team to review. Using the same set of review criteria, papers were individually read and analyzed, identifying themes which presented solutions to recidivism or informed us of the needs of successful reentry. Each team member then created a prototype solution in response to their findings. These prototypes were then shared and discussed, resulting in a preliminary prototype.

Some quantitative information was found to support the significance of the issue of incarceration and recidivism and gain insight into the amount of people a project such as Freedom Network could potentially impact. This information was located using explicit search terms such as “how many prisoners are in the US”.

From websearch results, organizations with reputable and clear methodology and reputations were selected and powerful, clear data was highlighted.

Notably, one additional source of research information which was introduced after the initial round of research was completed was a book by Bryan Stevenson (2016) who founded the Equal Justice Initiative - a non-profit staffed with lawyers who work toward prison and criminal justice reform. This book was discovered through a separate course one team member was enrolled in at the time this project was in development.

System analysis

Locating systems which were close in nature to our initial prototypes and solution concepts proved difficult. While some ICT concepts were discussed in our literature review, they were typically undeveloped or unavailable to the public with the exception of Pigeonly, a platform built by a reintegrated citizen after a period of incarceration, which was analyzed.

We searched online for the same keywords noted in the systematic literature review described above. However, additional terms belonging to a fourth area of tertiary information (*resources and communication*) were added such as: communications, inmate, email, forum, referral, resources, reference, network.

Sixteen platforms which met our criteria were discovered. In order to be used in this research, platforms needed to (1) be accessible to our research team, (2) serve the US prisoner or post-incarceration populations, and (3) provide a practical element via communication, legal advice, skill development, or community resources. To expand the availability of systems to analyze, we chose to include platforms and services that targeted veterans, actively incarcerated persons, citizens post-incarceration, and families of these groups.

Nine of these systems were selected and analyzed with an emphasis on looking at the most diverse and well-developed examples. Each team member analyzed three systems, identified useful

connections to our developing ICT solution, then adapted the group prototype in response to their findings. Prototypes were then shared and combined to create an improved prototype.

User interview

Initially, we sought to interview both newly released and rehabilitated individuals who had experienced incarceration. However, time constraints and lack of access to this population without inappropriately invasive approaches (such as showing up at NA meetings uninvited) made this difficult, so our criteria was expanded to include veterans. Two interviewees who experienced over two years of incarceration and exhibit rehabilitative behaviors after a period over 5 years post-release were interviewed. One veteran who experienced reentry over 30 years ago was interviewed. One veteran with severe PTSD who has also experienced multiple arrests and brief, recurring jail time was interviewed. One interview with an organization which already has a reentry program, EJI, was also conducted. All interviews were obtained via existing social networks with the exception of EJI who was contacted via email then called for a phone interview. We were able to speak with the head of their reentry program, Adam Murphy. All interviewees with the exception of Adam Murphy had an opportunity to review and critique the existing prototype.

After user interviews were completed individually, recordings of interviews were transcribed and then analyzed for recurring themes. Team members again adapted the group prototype, shared changes, and the prototype was further developed in response to new information.

Reentry resource collection and study

During the preliminary research and again during development, resources such as reentry or rehabilitation programs, job searches, technology tutorials, and tips for civilian life were searched for using keywords noted above. This research supports our conclusion noted throughout this paper that there are sparse community resources available and even less ICT-based solutions

servicing reentering populations. These resources were tracked, vetted, labeled, and later fed into Freedom Network’s resources page in our implementation (J. Navedo, online research, February 2019).

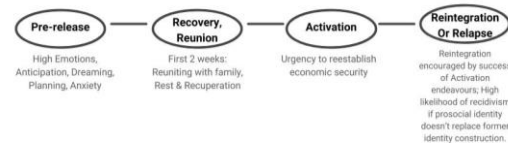
FINDINGS

Reentry process, identity (re)formation, and barriers to entry

Several themes appeared from our literature review and user interviews. People leaving incarceration enter the same environment in which they initially offended with the addition of a new set of social barriers and public attitudes toward former offenders and prisoners in place (Aresti et al., 2010). We identified two types of barriers generally encountered by people after a period of incarceration. *Explicit barriers* are physical and immediate barriers such as access to employment, housing, food, transportation, technology, medical and mental health care, and education. For some who are experiencing abuse, disability, or homelessness additional sets of explicit barriers exist. *Implicit barriers* are barriers embedded in systems, behaviors, and attitudes or biases which affect and may also actively inhibit or enable formerly incarcerated individuals such as social stigma, identity (re)formation, Behavioral Health and Trauma-informed services, positive community, and supportive relationships.

Durnescu (2017) proposes a five-stage model of reentry. We have adapted this model based on subtleties in that research and in light of further research conducted by this team, identifying four distinct stages, though the length of duration, overlap, dynamics, intensity, outcomes, and experience in each of these stages is extremely unique to each reentering citizen. These stages are *pre-release*, *recovery and reunion*, *activation*, and *reintegration or relapse*. The period of pre-release is marked by anticipation, planning, and anxiety. This is followed by the individual’s release from incarceration, the recovery and reunion stage, when they are reunited with their family (if they have any) and a period of recovery which typically lasts approximately two

weeks but can take much longer in many cases. Prison is an extremely traumatic experience and leaving the institutional corrections system for the big wide world with no structure and many new decisions is overwhelming. The recovery and reunion stage is an unavoidable and important stage for people to have a secure environment during. Soon, economic and practical pressures become apparent and individuals are confronted with the necessity of finding work. This marks the beginning of the activation stage which is often the turning point for successful reentry. Word of mouth networks tend to be incredibly important during this stage. If sufficient work or stable housing is not obtained, recidivism is more likely. Even with some success, desistance is not necessarily guaranteed. 75% of reentering individuals are rearrested within five years of release. Reintegration or relapse refers to these more long-term outcomes. A *reintegrated individual* is someone who has established a new, prosocial identity and who does not reoffend. The website application, Freedom Network, seeks to promote successful reintegration outcomes. It is clear in our research, in order to desist from antisocial behaviors, one must be committed to and supported in (re)forming a new, prosocial identity.



Adapted from Durnescu, 2017

The two primary occurrences in successful reentry after a period of incarceration are the security of basic needs, such as shelter and safety, and the disruption of anti-social behaviors (Aresti et al., 2010; A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019). While these themes are present throughout all four reentry stages they also serve as antecedents to successful reentry. Rehabilitation, or desistance, is only possible when basic needs are met. Only then are people able to focus on the

work of overcoming traumas and patterns to build a new, prosocial life. This is exemplified in the story of one research participant:

So, like I said, I got released and, um, didn't really have any plans... Eight or nine days later I got caught and was in jail again. And, basically I was just running around doing all the same stuff before I got into prison and I got – I was lucky. I just got caught with a little tiny piece of heroin, and they put me on Skagit County Drug Court. And so, what helped, you know, was being on drug court where, you know, they gave me 14 months of housing, they gave me drug and alcohol counseling. You know, I had mandated 12 step group attendance. Basically just added structure and support to my life. So, here I'm in this situation where my housing needs are taken care of, I have food stamps so I have food, you know what I mean? Are you familiar with the hierarchy of human need? Right. So I'm, like, so I'm movin' up, right? ... I've got my shelter, or my food and my shelter and my safety needs, and then, you know, I'm like starting to develop relationship with folks who are, in recovery and with my mental health counselors and all that kind of stuff, right? Building, you know. So then I move into school, right? And start kinda getting my first glimpses of you know, what I want to do with my life, you know? And, so it was really, like, having those base needs met and having a supportive environment that allowed me to start on that transformative work. (S. Simmons, personal communication, 7 February 2019)

While basic needs must be met through the support of others in the initial recovery and reunion stage, they are only maintained by a successful reintegration process (Durnescu, 2017). Redefining who one is so that a restructuring of behaviors and personal narrative facilitates desistance, or *identity (re)formation*, is the crux of reintegration outcomes. Despite having the highest prison population rate in the world (Price, 2019), the US has extreme social stigma against formerly

incarcerated individuals, regardless of who they are and the context of their criminal experience and release. This is evident in the sheer lack of community resources and available jobs for this population (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). Not only are there scarce resources, there are barriers to accessing many social services that may be highly useful during reentry. Regardless, in order to desist from antisocial behaviors, one must be committed to and supported in (re)forming a new, prosocial identity (Aresti et al., 2010). They will also need to catch up with the expectations and culture of a fast-changing world (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019; Reisdorf & Rikard, 2018; Semaan et al., 2016).

(Non)existing ICT solutions and digital literacy

While some platforms and technologies serving reentering populations were located during our research process, there is a clear lack of them. Many are not maintained or are inaccessible for one reason or another (J. Navedo, online research, February 2019). To compound this lack of relevant ICT resources, reentering populations tend toward extremely low digital literacy rates and do not have access to certain technologies (Ogbonnaya-Ogburu, 2018; Reisdorf & Rikard, 2018). Some reentry programs, if citizens are fortunate enough to have access to them, provide some digital literacy training (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). Further details may be found above in the related work section.

SOLUTION

We propose a three-part solution characterized by in-person, customizable mentorship program facilitated by a Partnering Organization working with reentering populations, resource acquisition, and ongoing communication and support.

Mentorship program

To support the (re)formation of identity and promote desistance and reintegration, we propose a mentorship program be developed by an organization in conjunction with the reentering population being served. This program should pool from reintegrated citizens who have proven behaviors which make them appropriate and positive Mentors for Mentees (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019). This means there are three user types incorporated into Freedom Network: Mentors, Mentees, and the Partnering Organization.

Upon release from incarceration, participants will be trained in basic uses of technology, including Freedom Network. This will increase digital literacy and give them a platform to become familiar with using web-based programs to communicate and find information.

The Mentor role is a natural step for a reintegrated citizen in that it provides an opportunity for individuals to continue developing their prosocial identity and provides a role for Mentees to aspire to so that they can give back to their communities.

Resources and digital literacy development

Locating resources post-incarceration is difficult - especially if someone is unable to use the internet with any degree of skill. Bringing resources to one place on Freedom Network aids Mentees in locating these resources quickly while using a platform which helps develop their budding technology skills. Resource suggestions are assessed prior to pulling them into the Freedom Network resources database, so relevancy is assured.

By using a very basic design, providing technology training in advance, and creating Freedom Network as a web-based platform, we are attempting to create ease in accessibility, usability, and the promotion of digital literacy through tutorials and tips available on Freedom Network.

Mentor Chat

A chat functionality provides ongoing and secure communication between Mentors and Mentees. For Mentees, they are directly supported while learning to use a common type of ICT. For Mentors, they are able to manage their Mentee caseload more efficiently by placing the Mentees in one place and providing quick oversight and communication ability (Rizvia et al., 2015).

SYSTEM DESIGN

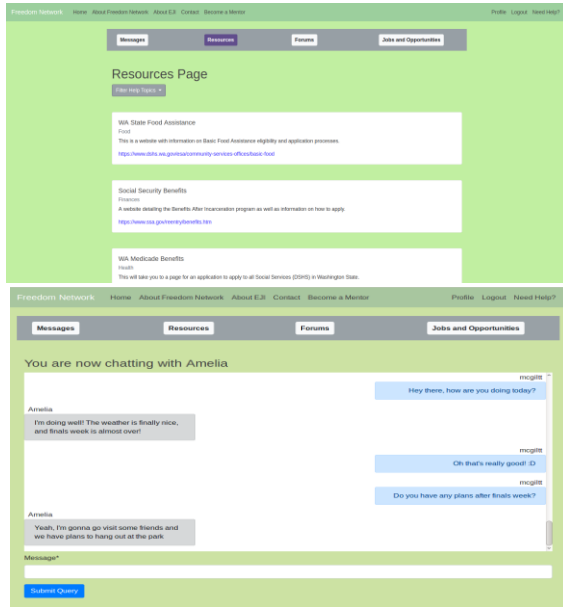
The three primary goals we aimed to accomplish with our project, based on our research, were simplicity, developing a sense of community, and providing easier access to relevant information. Freedom Network is implemented using the Django framework. Most of the site uses tools from Django but additional packages were needed in order to implement our chat functionality. These packages are redis and channels. This allows us to have a messaging/queue system behind the scenes. We chose Django primarily for its out of the box admin features. This would allow us to train an individual from our partnering organization on how to add users, change relationships between users, monitor chat behaviors, etc. Other Django advantages include user authentication and database management.

All users will have some similarities in their experience on Freedom Network. Anyone can view our informational pages and reach out to us via email by filling out a form. The breakdown of how the user experience changes depending on type is detailed below:

User: Mentee

This is the reentering citizen. Upon successful login, there are sent to our resources page. This page has a plethora of resources pertinent to reentering citizen and some additional information that might be more supplementary. Some examples of this information include using an email, where to apply for food stamps, felony friendly employers, etc. There is also a messages tab which

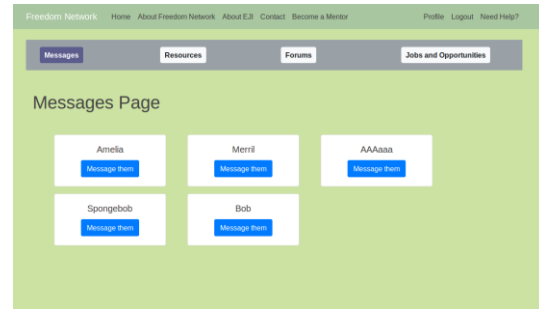
will allow them to instant message their assigned mentor. If the user needs help of is struggling they can reach out and (hopefully) have that instant feedback and assistance from the mentor.



For future work, we would like to implement a basic forum for our mentees. This would be a place to write success stories, tips, or just talk to one another. We also want a Jobs tabs that will pull job postings that can be filtered. We feel that these additional features along with was implemented will round out the experience we are trying to provide our primary user group.

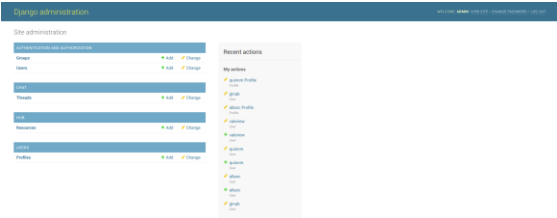
User: Mentor

This user type will be assigned by our partnering organization. This user will have a dashboard that simply lists out the people they are assigned to mentor. They can also visit the messages tab and enter a chat room with that person like what is pictured above. Mentors still have access to resources in order to potentially provide help to their mentee in finding a particular resource.



User: Admin

The admin will be the person that we would need to train in order to manage users of the site as well as creating and maintaining resources. They can will have the same view as the mentor user type but will not have any mentor assigned to them. Admins will have access to a special admin page that lets them perform their admin behaviors. No other user type will have access to this page.



The biggest challenge for our system implementation was the chat room functionality. Our chat rooms are implemented using channels, redis, and websockets. A websocket is established per user on their browser. Their websockets then connect to a channel specific for that user pair. For instance, if we have User A, User B and User C, pair AB would have a different channel than AC. This channel uses redis as sort of mailbox. It tells the sockets when there has been activity, such as a sent message, and our client side javascript acts accordingly. Websockets are handy in that they allow content on the page to be updating with having to refresh the page. This was important to us because we wanted any way we might confuse our users.

Our final prototype differs slightly from our original. This difference comes mostly from synthesizing our individual designs into one we all agree on. The features of these prototypes have stayed consistent.

DISCUSSION AND IMPLICATIONS

Freedom Network is an ICT solution that has been proposed in response to concern for high recidivism rates. There are three specific ways Freedom Network has been designed to promote criminal desistance in reentering populations.

Overcoming barriers

Resources such as referral lists, tech tutorials, and job-search tips provide reentering citizens with life-saving and life-changing information that is often hard to find (J. Navedo, online research, February 2019; A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019). While using simple technologies like Freedom Network, new skills which help users navigate the modern world are developed - particularly after long-term incarceration (Reisdord & Rikard, 2018).

Identity (re)formation - Why mentorship?

The development of prosocial behaviors and identity requires persistence, dedication, and the support of others (Aresti et al., 2010; Durnescu, 2017; A. Murphy, EJI Reentry Program, personal communication, 4 March 2019). Mentorship often gives Mentees guidance and encouragement while providing real-world experiences and knowledge in navigating a complex reentry process wrought with barriers (Brown & Ross, 2010; Durnescu, 2017; Rizia et al. 2015).

Partnering Organizations which work with the formerly-incarcerated population have the opportunity to design relevant reentry plans. Mentors with similar stories may be matched to newly released citizens (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019). Communication is supported by Freedom Network's easy-to-use and confidential chat function. Because having a way to give back to society and perform prosocial behaviors is the best

way to develop a new identity (Wright et al., 2015), becoming a Mentor is an excellent goal while in the reentry stages and allows those who have achieved this status a way to give back directly to their community.

Simplicity = Accessibility

By enrolling users into a mentorship program and training them to use Freedom Network in person, Partnering Organizations facilitate a learning edge which enables users to access technology, support, and updated skills. Because Freedom Network is a simple platform which brings resources directly to users in one place, it is accessible and facilitates levels of growth beyond the user's capacity at the time of release.

Implications

This research has uncovered a gap in information focused on reentry barriers, outcomes, and general data (J. Navedo, online and database research, 26 January 2019). It has also highlighted a desperate need for more robust community-based trauma-informed resources, community involvement, and systemic change which promotes rehabilitation rather than cycles of trauma and recidivism (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019).

In response to high rates of recidivism, we propose a solution in the form of an ICT which promotes digital literacy, support in the (re)formation of identity through mentorship, and the acquisition of community-based resources. Initiating a program such as this would provide a path to better understand the nature of desistance. With this information, more effective rehabilitation programs may be developed.

This research has implications for a variety of organizations and strategies including social services, development of community-based resources, technology development, education, criminal rehabilitation, legislation, and social justice endeavours. Citizen reintegration and desistance not only contributes positively to the rehabilitated individual, it also saves taxpayer

money (Price, 2019), promotes healthy communities and families, and garners a degree of equanimity and humanity in a population frequently dehumanized (Brown & Ross, 2010; Lee et al., 2013; Leverentz, 2010; Wright et al., 2015). Because there are significant parallels between populations post-incarceration and veterans, there is a direct implication that this work may aid in the support of veteran populations as well.

We encourage readers to understand identity formation in a way that, when engaged at a personal level, can transform the lives of anyone. It is also insightful to understand technology as a tool of personal empowerment, progress, and connectivity. A tool that when inaccessible causes a degree of oppression and inability to further one's position in modern life.

CONCLUSION

It is clear that reentering society after a period of incarceration is fraught with obstacles. Reentering citizens must secure their basic needs, achieve economic stability, and (re)form a new prosocial identity in the face of barriers to housing, employment, and community.

Community resources and mentorship are potent assets which facilitate better desistance and reintegration rates (A. Murphy, EJI Reentry Program, personal communication, 4 March 2019; S. Simmons, personal communication, 7 February 2019). Freedom Network is an ICT solution which provides users with a tool to increase digital literacy, obtain consistent and direct mentorship, and access resource information.

Due to a gap in existing research (J. Navedo, online and database research, 26 January 2019) and limitations in the scope of this project, Freedom Network proposes a theoretical solution. In order for results to be proven, a robust mentorship program must be developed with a Partnering Organization and the platform would need to be brought to market. Users would then need to be studied in a systematic way over a period of time.

Many of the barriers to successful reentry are not simple issues. These are large, systemic issues requiring a great deal of proactivity, cultural reframing, and legislative change. Though prison reform and the development of better social and reentry services directly impact this project, they are far outside our scope.

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