



# Designing Digital Tools to Support Online Job Search for Returning Citizens

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## Abstract

Finding employment is extremely challenging for returning citizens – formerly incarcerated individuals – as they face additional barriers due to their criminal records, gaps in employment, and limited experience with digital technology. Using design studio workshops and focus groups, we explored how returning citizens in the United States experience digital job search and how digital platforms and job search tools could be improved. We find that returning citizens are uncertain about when and how to disclose their felony status, and develop unique tactics in response. When faced with concerns about employment discrimination, especially racism, returning citizens maintained a practical outlook. And, participants expressed specific features they sought in technology platforms for job search: clear, simple job descriptions; auto-fill for commonly occurring input fields; and options for human assistance. Throughout, we pay special attention to Black/African American returning citizens, who have historically been discriminated by the criminal justice system in the United States.

## CCS Concepts

• **Social and professional topics** → **Computing literacy**.

## Keywords

prison, reentry, design studio workshop, formerly incarcerated individuals, job search, digital literacy

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## 1 Introduction

Over 400,000 incarcerated individuals returned to society in the United States in 2021 [12]. These *returning citizens* faced a number of obstacles transitioning home, of which job search was among the most critical [2, 4, 8, 14, 24, 27]. While job search can be difficult for anyone, returning citizens face additional obstacles due to their criminal record, gaps in employment, and reduced professional network [2, 4, 8, 14, 24, 27, 30, 49, 63]. These challenges are compounded by the fact that digital literacy is increasingly required to address them [58, 68]. Job search involves several digital elements including searching for job postings, preparing an online resume, applying online, and communicating via email. Despite a considerable body of literature on the difficulties of reentry [3, 4, 14, 15, 28, 37, 38, 53–55, 62, 66], research addressing the interaction between digital literacy and job search for returning citizens has only just begun.

Prior scholars have also explored digital literacy with women returning citizens, reentry tool development for returning citizens in Australia, and the implications of digital engagement of returning citizen in the United States [26, 47, 48, 56–58, 68]. Additionally, several researchers and institutions have conducted digital literacy and programming classes or design sessions with returning citizens including programs sponsored through organizations like Google, MIT, Brave Initiatives, and Alternative Sentencing & Reentry Solutions.

But while existing work has resulted in high-level recommendations, such as to provide job information tailored to returning

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citizens, it has not considered the specific features in the design of technology that can support job search for returning citizens. Therefore, we focus on the following questions:

- (RQ1) How do returning citizens navigate current digital job search challenges?
- (RQ2) How could digital technology be better designed to support returning citizens in job search?
- (RQ3) How do returning citizens perceive their criminal past and race as influencing factors in their job search?

To explore our research questions, we ran design studio workshops and focus groups, with an emphasis on understanding the experiences of Black men returning citizens – individuals who are disproportionately represented in the U.S. carceral system.

Overall, we found that while returning citizens could conceptualize common job search tactics and systems, and they favored systems that ultimately led them to connect to caring and knowledgeable people. When navigating common job search systems, returning citizens faced significant challenges knowing when and how to disclose their felony status, and often developed tactics to have more control over when to disclose their past incarceration. Furthermore, returning citizens possessed the potential to significantly improve their digital literacy and job search outcomes, as demonstrated by their ability to leverage the support and expertise of their social network.

Returning citizens and their social support also expressed specific features they sought in technology platforms for job search: clear, simple job descriptions; auto-fill for commonly occurring input fields; video-based tutorials tailored to their unique needs; and options for human assistance. Concerning race and discrimination, returning citizens were aware of discrimination during job search, either as they encountered it directly or as they might in the future. They were also able to articulate challenges related to transit-related spatial mismatch and its racial history. Transit-related spatial mismatch disproportionately discriminates socially vulnerable populations, particularly carless households, and African Americans [20]. Returning citizens also appeared hopeful but realistic about interactions with future employers, even when made aware of research about discrimination in the job search process. Surprisingly, when designing technology, participants did not focus on features to address discrimination specifically.

Finally, our research offers confirmation of and modifications to the Digital Rehabilitation Framework by Reisdorf & Rickard (Figure 1) [58] – a framework that explores both the digital and non-digital aspects of reentry.

In summary, we contribute design recommendations by *returning citizens and their social support* as it relates to designing tools for digital literacy for job search; perspectives of Black returning citizens as it relates to acquiring digital literacy skills for job search; and an updated version of the Reisdorf & Rickard (Figure 6). Furthermore, we broadly contribute to the broader conversation within HCI around job seekers from marginalized communities.

## 2 Related Work

We review literature on (1) returning citizens and job search, (2) technology and reentry, and (3) provide background regarding Black returning citizens.

### 2.1 Challenges in Job Search for Returning Citizens and HCI Research

Returning citizens, tend to have limited networks or networks less connected to legitimate work [6, 22], must contend with the stigma of incarceration [51], and decide when and whether to disclose their prior criminal history [31, 35]. Previous interventions, like in-person job training programs, have shown promise [40] but are less effective in digital job search. In HCI research, there is a growing focus on job search among a range of underserved communities—low-income urban adults, homeless populations, and so on [17, 19, 32–34, 67]. However, few studies focus on the experiences of returning citizens [26, 47, 48]. Our work contributes to this emerging body of literature by focusing on returning citizens' and their job search experiences.

Job search depends greatly on social networks and the ability to capitalize on them [67]. For low-resource job seekers – a population group that most of our participants also identify with – job search also requires support that includes personal and social needs. For example, Dillahunt et al. [19] conducted a literature review of HCI research that identified challenges that underserved job seekers face. They found that underserved job seekers require support for their social, personal, and societal needs and had an overwhelming preference for employment tools that addressed their social and personal needs. According to these authors, addressing social needs requires social networks, especially for job leads, interview feedback, and emotional support [19]. Personal needs require effort from one's self, such as the ability to articulate one's skills and career path and the ability to self-reflect [19]. Ogbonnaya-Ogburu et al. [48], focusing explicitly on returning citizens, confirmed prior work finding that returning citizens rely heavily on their social support for personal *and* social needs [48]. Ogbonnaya-Ogburu et al. [48] extended this work by finding digital literacy support, to be especially important for returning citizens' job search. Overall, social support members often bear the responsibility of helping their returning citizen counterparts in their job search and often support returning citizens with social and personal needs. Building on these findings in HCI literature, we contribute a study where returning citizens and their social support can design and discuss supportive job search technology, features, and strategies together.

Systemic racial discrimination magnifies the challenges of securing employment for Black people and even more so for those with criminal records. Bertrand and Mullainathan's classic audit study showed that Black applicants received significantly fewer callbacks than white applicants with *identical* resumes [7]. Employers who are already hesitant to hire Black applicants become even more reluctant in the presence of a criminal background [49]. In fact, Pager found that Black job seekers *without* criminal records were less likely to receive employer interest than white applicants *with* them. Such findings highlight how systemic racism and criminal stigma intersect and increase employment barriers for Black returning citizens. We extend HCI research by specifically understanding the job search experiences of Black returning citizens and the potential opportunities to design in this space.

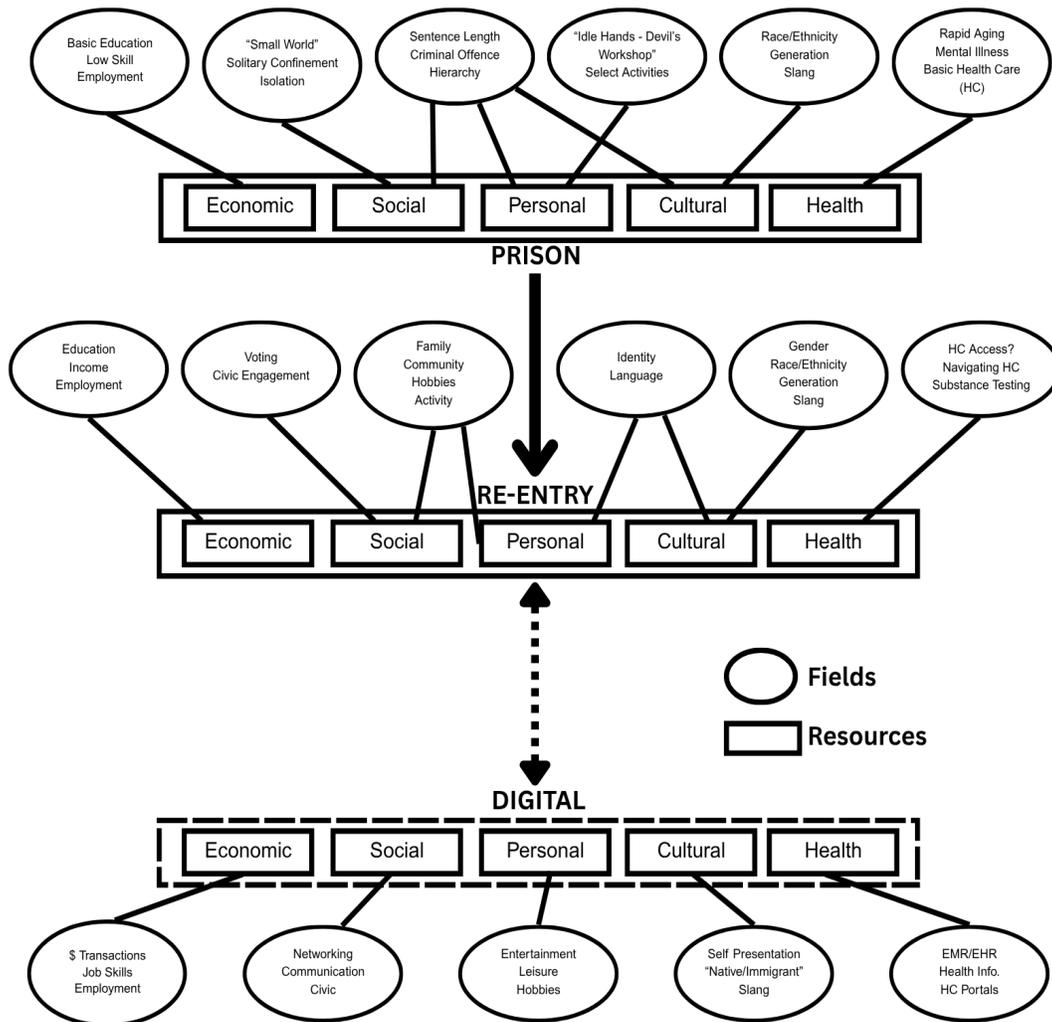


Figure 1: Reisdorf and Rikard Digital Rehabilitation Model [58]

## 2.2 Digital Reentry

More recent research offers deeper insights into digital aspects of reentry [13, 25–27, 39, 44, 45, 47, 48, 64, 68]. Prominent among them is Reisdorf & Rikard’s *digital rehabilitation model* for incorporating digital skills [58], which provides a theoretical framework for this research.

The digital rehabilitation model (Figure 1) suggests that *digital exclusion* is similar to *offline social exclusion* from incarceration to reentry. To understand digital exclusion in this context, it is essential to take into account various factors, including economic, cultural, social, health, and personal aspects of an individual or group. Reisdorf and Rikard also point out that each of these categories can function independently.

We modify the Reisdorf & Rikard’s *digital rehabilitation model* by providing empirical evidence demonstrating that social, personal, and cultural factors should be taken into account in all areas of digital reentry as they can impact economic aspects of reentry, like searching for employment. We expand on our modification of the Reisdorf & Rikard’s *digital rehabilitation model* in the discussion section.

Presently, other researchers have begun to consider how digital technology can address digital obstacles in reentry [13, 25, 26, 44, 45, 47, 48, 64, 68]. Given the growth of smartphone ownership, Choi et al. [13] proposed a mobile application to support the teaching of digital literacy to women returning citizens. Sugie [64] recommended targeted employment resources for returning citizens, especially

older ones. Lastly, Grierson et al. [26] called for applications with information tailored for individual returning citizens, allowing them to find and access relevant resources, improve their digital capabilities, and view tips for independent living. We extend this research by understanding what specific content and features would be most supportive when designing technology for job search for returning citizens.

Finally, much of the above work has also resulted in broader design guidelines. One key point is that any technology ought not to be associated with the criminal justice system [26, 58, 61] – who play a role in the control and surveillance of returning citizens before, during, and after incarceration. Researchers also recommend technology tailored to the intersectional identities of returning citizens [10, 26] including differences in abilities, different cultural backgrounds, different linguistic capabilities, different life experiences, and different modes of accessing technology in the design of digital reentry tools.

This emphasis on inclusivity and equity is especially important given the increasing presence of automated systems in job matching, resume screening, and unemployment services. Algorithmic decision-making systems can reinforce racial and economic disparities when not designed with fairness and accountability in mind [21]. These systems play a critical role in intermediating how returning citizens access jobs, training, and public services. While our study does not engage with these systems directly, it offers empirical insights that can inform the development of more equitable digital platforms in the context of reentry.

Overall, our study builds and expands on the work above by designing with returning citizens and their social support (individuals who often bare the most responsibility of supporting returning citizens returning home). Specifically, we look at the design of job search tools at a more granular lens – examining what specific features would be most supportive of this community. We also consider the identities of returning citizens as they relate to employment discrimination, specifically their racial background and conviction status. Finally, we update Reisdorf & Rikard’s digital rehabilitation model emphasizing the impact of the social, personal, and cultural aspects on one’s identity as it relates to health and economic gain of a returning citizen.

### 2.3 Black Returning Citizens

Given the large percentage of Black or African American men in our study, understanding their historical context and perspectives is critical. In the United States, the criminalization of Black bodies has occurred since its founding, extending not just to convicted criminals but to all Black people [1]. From slavery to the failure of the Reconstruction era, to the imposition of Jim Crow laws, to the War on Drugs in the 1990s, Black bodies have been subject to stereotyping, containment, and control [1, 50]. In 2018, Black men were incarcerated at 5.8 times the rate of white men [12]. Meanwhile, prospects for Black returning citizens are worse than for others. They are more likely to experience longer sentences, more likely to return to underserved neighborhoods [29], and less likely to find jobs [50].

Some researchers have sought to understand the viewpoint of Black returning citizens to counter the deficit focus of much reentry

work and speak more to the strengths of Black men returning citizens. For example, in a mixed-methods study, Payne and Brown [52] found that participants understood the circumstances that led them to prison and what was needed for successful reintegration into their communities (e.g., self-discipline and personal, social, and economic security). DeVaux [16] considered how Black men in reentry define success and found that Black men shared researchers’ definitions of successful reentry, which meant meeting material (satisfying quality of life), social (community reintegration), and psychological goals (positive self-concept and self-worth).

Our work builds on previous research that seeks to understand the experiences of Black returning citizens and explore current and new strategies used to support digital literacy for job search. We extend prior work by addressing how Black men returning citizens reflect on their experiences with digital literacy and job search and their understanding of employment discrimination, race, and racism as they navigate technical tools.

## 3 Methodology

### 3.1 Participants and Recruitment

We recruited eleven participants – six returning citizens and five members of their social support networks (henceforth, “social support”) – from the greater Detroit area. We recruited participants through five reentry organizations (four nonprofits and one government agency) and snowball sampling. All returning citizens were men formerly incarcerated between 1977 and 2017 and released between 2018 and 2022. Five self-identified as Black or African American, and one as white. Their educational backgrounds ranged from high school diplomas to some college or associate degrees (i.e., two participants’ highest level of education was an associate’s degree; two participants had some college credit but no degree; and one only had a high school degree). One person disclosed a cognitive disability. Income levels also varied but didn’t necessarily match education level.

The five social support participants ranged in age from 25 to 74. Four were women; one was a man. They identified as Black, White, or mixed race with educational backgrounds ranging from high school diplomas to master’s degrees (i.e., two had a high school diploma or GED; another two had a master’s degree, and one had some college credit but no college degree). Incomes ranged from less than \$20,000 to \$75,000 and roughly correlated with education. Their relationships with their counterparts included mentor/reentry specialist, son, and colleague. One person noted having a mobility disability. All participants received \$150 for participating. Events were hosted at a non-profit organization familiar to and comfortable with all participants.

### 3.2 Workshop Design

We implemented a pair of two-day workshops in 2022, each lasting about four hours per day and each began with a design studio workshop [36]. Design studio workshops allow researchers and participants to collaborate on the ideation and development of tools and resources [36]. We partnered with the returning citizen participants and their social support to iterate on design ideas to improve their digital literacy when it comes to job search. The goal of the design studio workshop was to give space for returning

citizens and individuals who currently assist returning citizens with digital literacy the opportunity to express their own ideas for tools and resources that would support them.

To ensure all content was accessible and relevant to our research questions, a pilot workshop was conducted with our advisory board or authors of this paper – individuals who have close hand knowledge with the participants of this study.

**3.2.1 Day 1: Design Studio Scenarios with Social Support and Returning Citizen Participants.** On the first day of the workshop, returning citizens and social support attendees were paired as they engaged in design studio scenarios. After introductions and orientation, participants were asked to discuss, ideate, and respond to, first individually and then as a group, three scenarios involving digital job-search tasks<sup>1</sup>:

- (1) Completing an online job application: *You are applying for a new job at Ford Motor Company. You've found the job online, and see the form for applying.* Participants were then shown illustrations of a job advertisement and an online job application portal and told: *You are unsure what information to put in the form to highlight your experience in the best possible manner.*
- (2) Writing a cover-letter email to an employer: *You are writing an email on your mobile phone to a potential employer or customer. You've drafted it but aren't sure if it sounds professional.* Participants considered what kinds of assistance (e.g., writing suggestions, templates) would be useful in this moment.
- (3) Completing a LinkedIn profile: *You're setting up your LinkedIn profile and are prompted to upload a head shot. You've heard that people sometimes don't get call backs from jobs they apply to because of their race, so you're wondering about whether you should upload a photo. What would make it easier to decide how or whether to respond?* This scenario probed concerns about discrimination and how platform design might mitigate bias.

We introduced each scenario by reading it aloud and provided accompanying artifacts to support the brainstorming process (e.g., blank printer paper, paper with a cellphone user interface, paper with a laptop user interface). Prompts probed about previous experience with each scenario, preferences about each scenario, and ideas for how technologies in each scenario might be designed. We encouraged participants to express their ideas in whatever way they felt most comfortable, including by writing, drawing, or speaking. The goal of this format was to foreground participants' expertise and promote agency in shaping technical solutions.

**3.2.2 Day 2: Focus Group among Returning Citizen Participants.** On the second day of the workshop, returning citizens participated in a 90-minute focus group grounded in *critical consciousness* methodology [23]. Critical consciousness is a pedagogical practice rooted in Paulo Freire's work in *The Pedagogy of the Oppressed* [23] and provides participants with the ability to reflect on discriminatory experiences. We introduced critical consciousness tactics to elicit reflection on structural discrimination in job-seeking contexts [18]

<sup>1</sup>The full details are provided for the first scenario and we have provided abridged details for the remaining two

by gradually introducing race-related terms (e.g., stereotype threat, internalized racism, institutional racism, microaggressions, etc.) based on examples shared by the group.

### 3.3 Data Collection

We captured audio recordings, participant drawings, and field notes for both workshop days. All data were anonymized and professionally transcribed, then stored on an institutional cloud server approved for sensitive data handling by our institutional review board.

### 3.4 Data Analysis

All data (workshop audio recordings and participants' drawings) from the design studio workshop were analyzed using thematic clustering and iterative summarization, focusing on our research questions and content not revealed in previous literature [59]. In collaboration with a nonprofit representative who attended all sessions and self-identified as a returning citizen, we developed our initial codes/themes after each session. Next, open coding was conducted when analyzing all of the workshops to understand recurrent themes. Drawings were also analyzed based on the commonality of recommendations, features, and characteristics. We synthesized and discussed the open coding of workshop data with the initial themes discussed after each workshop to arrive at our final set of findings.

We employed member checking [9] during and after the workshops. We shared preliminary interpretations with participants and advisory board members to confirm accuracy and resonance.

### 3.5 Positionality Statement and Advisory Board

The core research team consisted of two Black women (including the first author) and one Asian man, all established residents of the United States and all with experience researching marginalized communities. None of us have direct experience with the carceral system, though the first author engaged with it and with incarcerated inmates over several years through volunteering activities.

We know that our knowledge of returning citizens and their perspectives is limited. To ensure that we approached our work ethically and sensitively- from research design through analysis and writing- the core team recruited a five-member community research advisory board composed of returning citizens and social workers. The first author met with the board bi-weekly over Zoom to discuss recruitment, research designs, ethical implications, race and discrimination (both as background and as it might occur in the study itself), and results of methodological pilots. We paid members of the committee \$20.00 per hour for their time. We invited those who provided significant guidance in the research to join as co-authors and to review drafts of this article.

## 4 Findings

We organize our findings in four categories: prevailing tactics and workarounds for online job search; challenges of bias and discrimination; and participant design recommendations. Throughout, we emphasize issues that have not been stressed in previous literature about returning citizens.

Below, participants are coded "RC" if they were a recent returning citizen (i.e., returning between 2018-2022), and "SS" if they identified as someone providing social support to a returning citizen. It should be noted that one of our social support participants was themselves a returning citizen, though it had been some time since their release.

## 4.1 Tactics Used to Work Around Job Search Challenges

**4.1.1 Tactics for Completing Forms.** The design studio workshop revealed many workarounds for addressing the challenges of job application form-filling. Most of the ideas were proposed by the social support participants, most of whom were not formerly incarcerated. We posit that the social support participants were more outspoken with suggestions as there was a presumed trust in these individuals and their expertise in applying to jobs by returning citizens. Their suggestions included responses for required form inputs and using creative language to describe jobs and positions. For example, SS6, who was previously incarcerated, describes advice she typically gives to the (primarily women) returning citizens that she works with as it relates to filling in job application fields:

And if they run into something where, like you said, looking for experience, you have none type "none" [and] that will satisfy the field, you know, unless it's requiring a certain number of characters. And in that [case] I put "none" and give it periods all the way till you give them enough characters and move on to the next one.

Similarly, SS8 shared advice on what he tells his returning citizen clients when faced with an application form question that is required but for which they have no response. He remarked,

I just always tell 'em to put zero for zero [knowledge or experience]. Just write zero. I mean, what else do you have to put there? Just put zero.

Lastly, SS6 shared the advice she provides to other returning citizens as it relates to discussing one's criminal background:

Well, like I say, when it comes to the felony question, I never answer yes or no. I'd say 'will discuss at interview.' Cause if you not gonna talk to me, there's no point in telling you my business.

Social support members recognized the precarity of navigating an employment form for their returning citizen counterpart, especially as it relates to creating an employment application form with a competitive multi-year work history and criminal history description that would lead to an interview.

Participant also recommended the use of a "functional resume" which avoided position dates to avoid the appearance of gaps in employment. RC3 stated,

You know, there are skills that you learn depending on where you're at, and then you just left, we call it like a functional resume. You would leave the dates themselves empty, but you would put on there, what job you had, what skills you learned... So you wouldn't make it seem as though it was much different than other resumes.

SS1 agreed:

They have to have a functional resume because the gap in time from the last time they were out and then not working... It could be much of 10 years and it's hard to get hired when you have such a large gap. [Mimics an employer asking a question:] "What was you doing?" That's their next question. And, you really don't want to answer that.

Overall, while there was no agreement about what actually improved the chances of an interview or job offer, it was apparent social support participants provided advice based on their own experiences. Though these comments were made in the context of tedious form-filling, it is noteworthy that all of the advice focused on trying to address the anticipated bias against people with a conviction history.

## 4.2 Bias and Discrimination

All returning citizens in the study discussed experiencing bias and discrimination. Sometimes, the source of the discrimination (e.g., due to race, felony status, or something else) was clear; often, however, it was not.

**4.2.1 Racial Discrimination.** Our participants shared many stories of discrimination. However, to the extent that they discussed racism, they talked about it as an ordinary occurrence in a matter-of-fact manner, both as experienced in prison and afterward. At the same time, their discussion of racism tended to focus on overt racism, even when the discussion veered into institutional or internalized racism. Thus, they did not acknowledge all potential forms of racism in their lives, but those that explicitly impacted their needs (e.g., economic and health).

Several of our returning citizen participants had experienced prisons located in rural areas with a predominantly white correctional officer population. One of them, RC5, quiet through much of the workshop, was eager in the focus group to share his experiences of racism. He said that he could get a PhD in racism, and continued...

It was like you just smelled it [racism] in the air. Like it was a bunch of racist stuff going on. You could talk to, uh, have conversations with the COs [correctional officers] and you could tell... They are slower to get to fights [involving Black inmates]... And even if you get jumped, it's like they are just walking... They lie on tickets... They set people up.

Most of our returning citizen participants had their own stories of racism in prison. There was a recognition of its existence, but a lack of awareness in all of the ways it may have been demonstrated in the participants past or present life.

Racism also carried over into their job search after prison. RC9, for example, discussed their perception of applying for a job in competition with a returning citizen who is white:

Because say for instance, me and a white individual came in here for a job interview, don't know the background, both came from the joint. Both may have similar crimes. When you go in there and they ask you, "Why do you think you deserve this position? Or, What can you bring to my business to accelerate?"

And I might give the proper answer. Guarantee it is like, okay, yeah, he gonna take my business to the next level. [But] Johnny [a white man] here going in there and say[s], "just because I need a job," due to the fact that the man is hiring, [The hiring manager] is probably more than likely [going to hire] the white man.

RC9's statement demonstrates a common recognition by most of the returning citizen participants that racism can happen in an interpersonal and institutional manner. Their statement also echoes research that has found RC9's viewpoint to be true [50]. While participants were able to recognize various forms of racism in their lives, stories of the different forms of racism only occurred when prompted, as participants often chose to reflect on practical strategies on how to get a job.

Because the U.S. criminal justice system is known to have widespread issues with institutional racism, we also probed along these lines in the focus groups. Participants seemed to understand the term "institutional racism," not as implicit forms of racism embedded in system norms and processes, but as overt racism committed by institutions or by groups. For example, when asked to define what they meant by institutionalized racism, RC5 remarked,

I think institutionalized racism is not just one person. It is the whole prison. And then it's like, it's embedded into the prison.

RC5 continued with an example, which suggested personal racism – bias and discrimination by a white person to a person of color:

I got tickets [a form of prison sanction]. I got so many tickets that I beat...[For example] the CO put spud [liquor] which is the liquor version [in my cell area]. It is the alcohol version of liquor....So [he/she/they] put that in my area of control, which it was somebody else, but they wrote the ticket on me. And I proved that it wasn't mines....

RC5 also felt that because several correctional officers were related by familial ties, their collective discrimination was "institutional."

Yet, despite their conceptions of institutional racism, their discussion of racism after release tended to involve many instances of it. For example, many noted how the job market was stacked against them, even without overt racism. For example, RC7 shared their experience of having to drive further from home to obtain job opportunities in a city known for historical redlining that intentionally separated Black and white communities:

RC7: I mean, in addition to that, all the jobs worth having are out in white neighborhoods and owned by white people.

Facilitator: What are the jobs worth having?

RC7: Having jobs that pay over \$15?

Facilitator: So, give me some examples.

RC7: High paying jobs. Jobs that pay you enough to where you can make a living instead of having to hustle and have the job, for example. Uh, uh, managerial jobs at, uh, corporations, all of them, okay, are in Auburn Hills, Rochester Hills [richer neighborhoods in Greater Detroit].

Severe limits on public transportation in Detroit (also a result of historical racism) additionally made it all but impossible for many returning citizens to entertain those jobs.

Finally, there were mentions of the need to "assimilate" or "code-switch" along racial dimensions. RC2 summarized his impression of what returning citizens needed to do. He stated,

That's what we call successful assimilation....Well, that's the goal of education. Mm-hmm the goal of education is to assimilate you into society's workforce...to make you a useful citizen....If you're not assimilated, then you going to stay marginalized. You're gonna stay outside the mainstream.

When asked during one of the design studio workshops whether returning citizen participants felt they needed to change themselves for successful reentry, most agreed that they did. Two participants elaborated that there were aspects of prison life that one must leave to acclimate home successfully. Overall, RC2 and several returning citizen participants recognized the need to change or adjust their demeanor, often in a racial code-switching manner [42], to navigate job search.

*4.2.2 Discrimination Due to Previously Being Incarcerated.* Participants also discussed their non-racial identities and the implications of being identified as a returning citizen. For example, participants were aware that being identified as a returning citizen caused individuals to react to them differently. They thus avoided identifying themselves as returning citizens; they used other terms like father, son, businessman, or Black man to identify themselves. For example, RC3 stated,

To be blunt, it's just the way society is. We had a discussion a couple nights ago and we live in a very punitive minded society, okay? And so most people say, "Hey, he's been to prison, so what was he in for?" Or, "We don't know, but he was in for a very long time." So they figure it was a violent offense. Most people don't feel comfortable around people that have committed violent offenses... Traditionally, psychologically, people feel more comfortable hiring somebody that does not have a criminal, uh, criminal background versus somebody that does, particularly when you think or believe that this person has a violent conviction.

There was also recognition that certain professional fields or positions lacked diversity and, as such, access to blue-collar jobs was often easier to attain. When discussing research about returning citizens being in more blue-collar jobs over white-collar jobs, RC3 responds,

Just look at any board of directors for any company. Look at the C-suite and especially Fortune 500 companies. That'll explain a lot to you right there. Now if you add a felony to that mix, they're not hiring that person. They have difficulty hiring, uh, a, a citizen without a felony because he or she is from the East Side, but they went to Wayne State and got a bachelor's degree in whatever case it might be. There's a lot of that going on. More than qualified...So, when we

come home for one of the blue collar jobs are easier to get.

RC7 and the returning citizen participants aspired for better but grappled with both societal and internalized awareness of being penalized for not only being a returning citizen but also a host of other interconnected qualities.

Despite discussing these difficult topics, the focus group conversations on the whole were casual. Overall, while some participants expressed frustration about their experiences, most were pragmatic regarding their concerns. They had clearly encountered numerous discriminatory events, but they maintained a practical outlook as they continued searching for a job.

**4.2.3 Perseverance Despite Discrimination.** As mentioned above, participants were aware of the potential for discrimination in the hiring process, but throughout the workshop, they tended to express a persevering, hopeful view. Whatever the circumstances, what was important for them was to keep trying. This was true even during those moments in the workshop when the first author explicitly introduced hiring discrimination as a topic of discussion. Participants tended to focus on solution-oriented methods within their control to navigate their job search.

When responding to a question about the potential introduction of racial bias in video interviews, RC7 responded, "They always gonna discriminate against you. So you just gotta have it in your mind that I take what I can get until I can do better..." RC7's statement demonstrates that returning citizens are aware of employment discrimination and their role in responding to discrimination, which was to keep applying despite the existence of discrimination. RC5 echoed a similar sentiment, suggesting that years of extreme racism in prison inured him to discrimination in job search:

It don't bother me because, man, I've been going through that shit for years. Okay. I've been going through for years, so I know like all signs of it... I know how to peep racism. I know how to smell it. I know what it look like.

Meanwhile, a similar point was reinforced by returning citizens' social support. SS8 shared, "Well, one thing I always say is I would encourage you to never let your record stop you from going through the process because it's all, I mean, even when we can do a background check, jobs be looking for specific things [i.e., skills]". Overall, whenever discrimination based on race, criminal past, or zip code/location was brought up during the discussion, the resounding solution was to keep applying to jobs.

Prominently missing from these discussions were any suggestions to change the system itself. No one mentioned methods to stop employers from continuing discriminatory practice, as suggested in prior work [18].

Next, throughout the workshops and focus groups, there was a recognition and understanding that an individual should be penalized for criminal activity, but participants did not think that penalties should limit returning citizens from all jobs. For example, after everyone agreed in the second workshop that employers should focus on skills first, SS6 remarked,

Well, I think that's commendable [that skills are]...the upfront focus...the primary focus. [However] secondary

focus though, is if you went in prison, what was you in for cause like, you don't want somebody with a CSC (criminal sexual conduct) case in your massage parlor for real, for real...

Participants also agreed when SS10 made a point about employers needing to think critically about what crimes should disqualify a returning citizen from a job. She said,

If you are going to be manufacturing lids for plastic wear for a living, you can have a CSC [criminal sexual conduct conviction]... There have to be some places [where people with a variety of criminal convictions can work]... We just off the bat discriminate based on this [criminal history].

Others in the focus group responded with nods and verbal agreement to this comment. There are laws to prevent returning citizens from being discriminated against solely on criminal background [1], yet this information was not raised during the workshop.

### 4.3 Content and Feature Recommendations from Participants

Next, we relate content and technical features requested by participants, emphasizing themes that came up repeatedly.

**4.3.1 Seeking Information about Jobs.** In both workshops, participants wanted more specific information about jobs from employers to better assess their ability to take on the job. SS4, RC7, and SS10 all mentioned this. For example, SS4 mentioned the difficulties of understanding the specifics of a job when she stated,

My thing was if it's a person from prison... they not having any knowledge of the experience of the job. You know... Chrysler is hiring, Ford is hiring, but if you filling out that form and you get hired, you wanna know what position you work in, what is what, what is required of you physically... 'Cause you get a lot of guys that's older coming out.

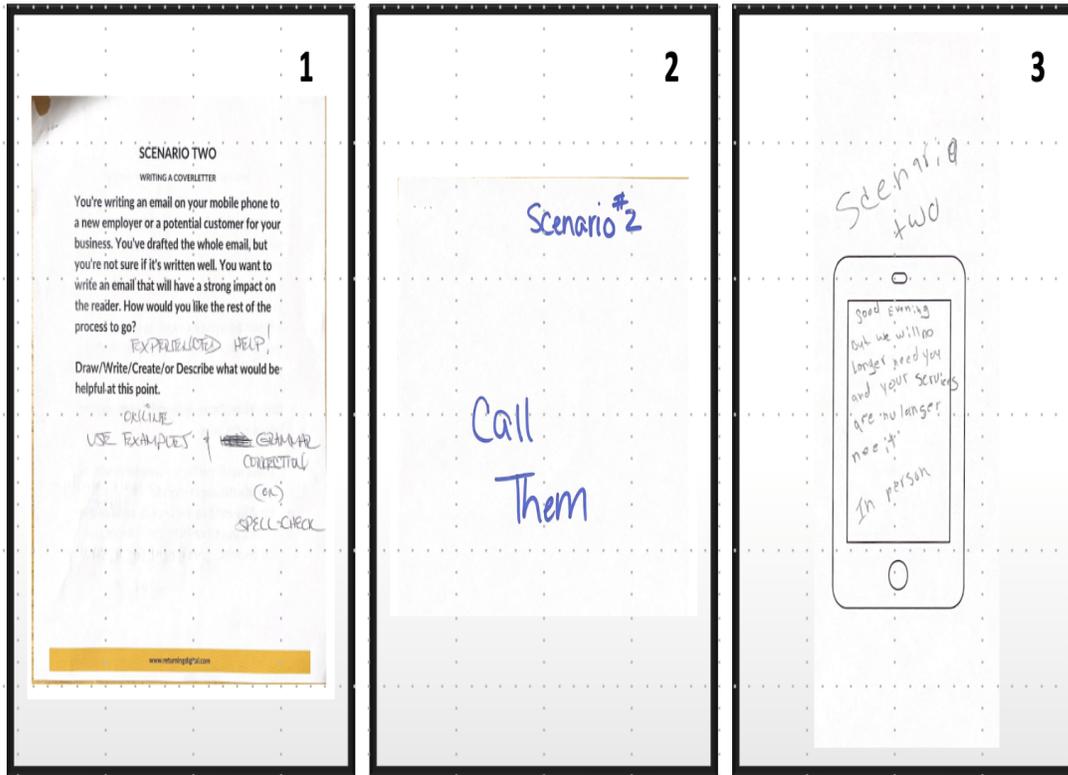
RC7 echoed a similar sentiment when he stated,

I think the job description should be a little more clear as in what you'll be doing, how you'll be doing it, as opposed to it being broad. [For example,] I'm hiring a salesperson. What are we going to be selling?... How much time am I to donate to this selling?... Where am I going to sell this?... Do you already have a clientele? What actual role do you want me to play in it?

The above comments suggest an immediate recommendation to employers, which is to provide more detail about the day-to-day nature of the work in job descriptions.

**4.3.2 Applying to Jobs.** Participants suggested ideas for several aspects of the job application process: getting help with an online application or cover letter, enabling video-based responses to job calls, and bypassing the online application process altogether and instead having direct access to employers.

Returning citizens preferred a person assisting them with their job application over any digital tool, but they also suggested some technical possibilities. In Figure 2, we highlight participant artifacts from the design studio workshop that highlight the importance



**Figure 2: Multiple participants brainstormed digital literacy for job search tools that gave them access to another person (e.g., an employer or a digitally literate individual) (1) Image of one of the design studio worksheets where a participant writes, “Experienced Help!, online examples and grammar correction (or) spell-check”, (2) A plain white sheet of paper where a participant wrote, “Scenario #2 Call Them”, (3) Image of a cellphone that has writing in it that states: “Good Evening, But, we will no longer need you and your services are no longer needed....In person”**

of having access to a person when experiencing digital literacy challenges. For example, RC2 wrote, “Experienced Help! as an idea to support them when it came to obtaining digital literacy support for job search. SS8 wrote, “Scenario #2 Call Them” when asked to brainstorm what support they would like when it came to writing a professional email. In general, most returning citizens brainstormed a resource that provided them with easy access to a person. Additionally, most of the social support participants also agreed in this strategy when seeking support for digital literacy challenges.

Some participants also brainstormed using video as an option to apply to a job in lieu of a form-based job application. For example, Figure 3 shows an idea created by SS8, discussing making a simplified application process that uses video and only requests relevant information for the job.

Several participants liked the idea of using video, and when asked about the potential of video introducing new types of bias, SS6 countered and responded, “video interviews can overcome some stereotypes.”

There were a few cases where other types of technological features were suggested. Figure 5 shows one such case where participants mentioned a technical solution. RC11 and SS10 collaborated on a drawing of an application that provided users the option to have a virtual assistant – a chatbot with a graphical avatar – where users speak out their employment history. SS10 describes it by saying, “we collectively came up with the video... like a virtual assistant that was like, what were the last three jobs?” While bots and AI tools were rarely suggested as ideas or current practices, this idea shows that some participants did see digital assistance tools as a viable option for help.

Ultimately, though, our participants just wanted to apply to jobs face-to-face. There were multiple mentions of wanting to bypass the written application process altogether, and go straight to an interview. When asked why they prefer direct access to an employer, all participants agreed with RC2, who put it succinctly: “Um, because I know how to sell myself.”

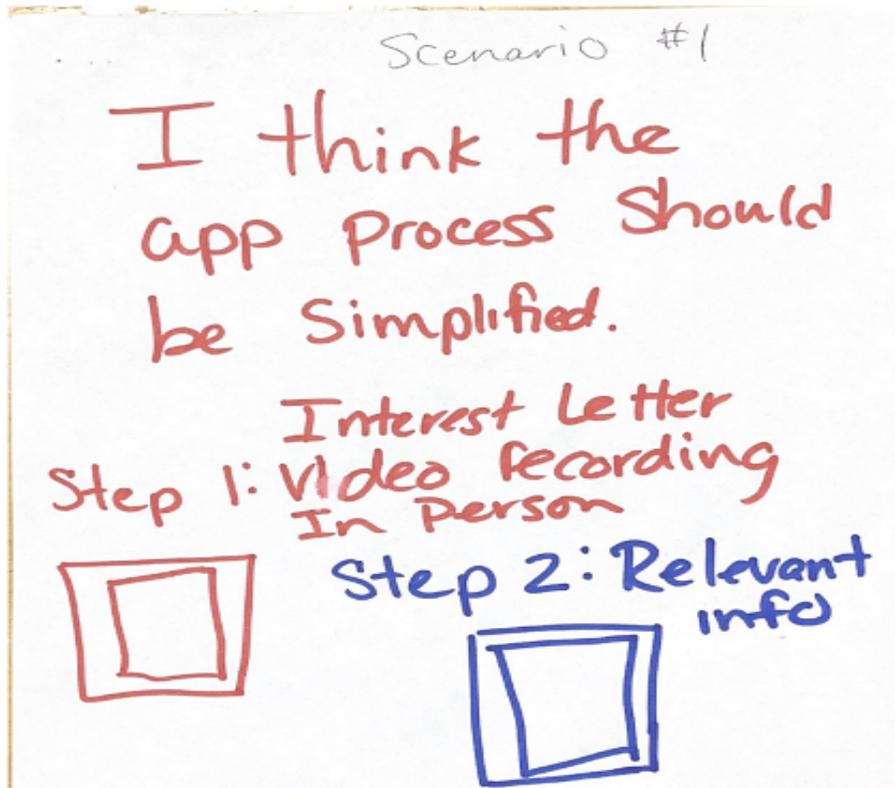


Figure 3: Image of participant ideas from left to right: (1) On plain white paper, a participant writes and draws, “Scenario 1, I think the app process should be simplified. Interest Letter, Step 1: Video Recording, In person, Step 2: Relevant Info”,

#### 4.4 Preferred Sources of Help

As above, returning citizens expressed a clear preference for synchronous human help. But, from whom? Their order of preference was tailored support by their social support, support from a trustworthy person with relevant knowledge, and then, support from anyone willing to help. (This list does not include purely digital forms of help, which again, appeared to be a last resort option.) Below, we review the various types of support, in the order of most preferred to least preferred, as was expressed by participants.

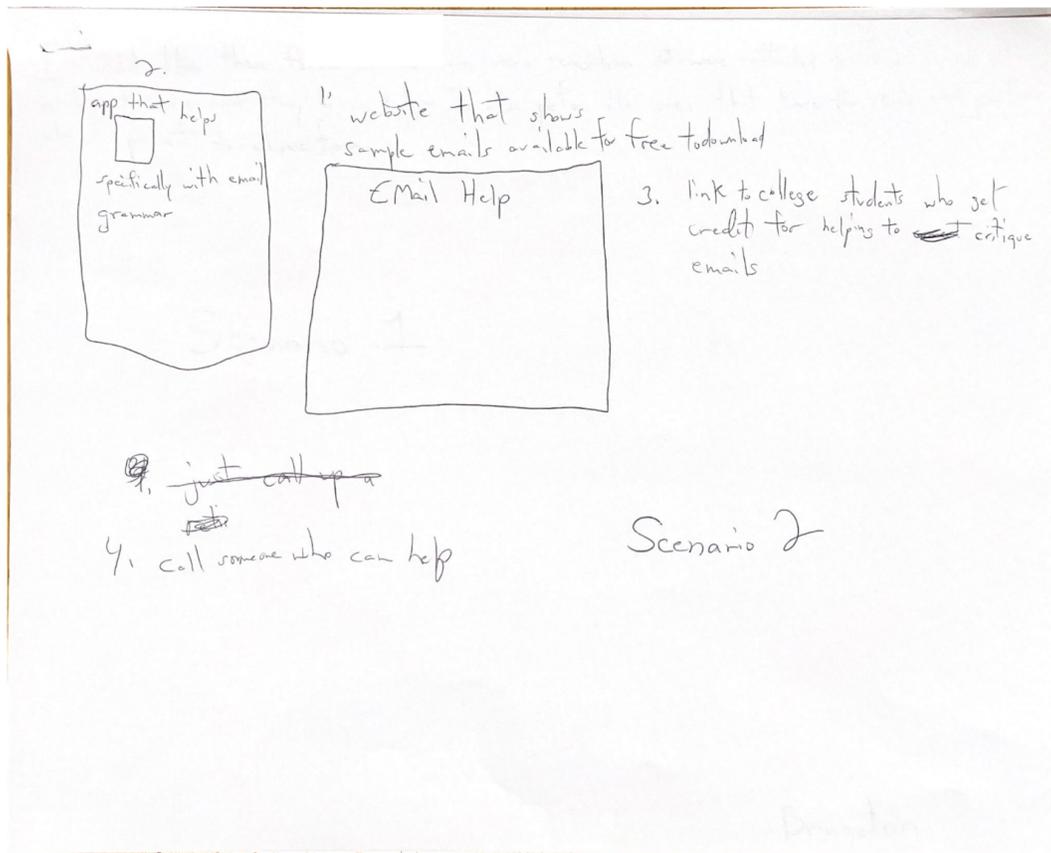
First, returning citizens participants wanted in-person help from friends and family who know them well and can provide tailored advice. When the lead author asked the entire group their preferences of support, RC2 described what he felt most other returning citizens wanted, including himself,

They [returning citizens]...need somebody to hold their hand... If they go into a company, you fill out [an] application. I gotta take [SS1] with me. I want her to sit right there. And, [help] me to understand what is right there (while grabbing the example online application form), you know, then she gonna tell me what to fill in.

Next are people who have relevant knowledge they can trust (e.g., someone with inside information about a job, or someone who knows how to write cover letters), even if there is no personal relationship. For example, RC3 shared as his best idea the creation of a tool that provided job-seeking returning citizens with external support from college students who obtain college credit for providing feedback (Figure 4). When asked if a robot would be ok to replace a human being in the idea suggested by RC3, he responded,

...that would be unfair because in that regard, uh, it's supposed to be a platform where the college student is getting the credit and you're supposed to be dealing with a human being that can make real life suggestions. So a bot might tell you anything. It'll just tell you, whatever's been programmed to tell you, but a human might look at it and say, “Hey, you know what, normally we wouldn't say this in a professional email, but given that you are going into this particular field, this is okay for this field.”

In a different idea for scenario 2, RC5 also emphasized the importance of interaction with a person knowledgeable about job search tasks or the specific company a returning citizen is applying to.



**Figure 4: A paper with writing on it showing RC3’s multiple ideas of obtaining assistance, which include (1) a website that shows sample emails available for free download, (2) an app that helps specifically with email grammar, (3) an app that links to college students who get college credit for help to assist and critique emails, and (4) calling someone who can help.**

For example, RC5 stated, “I had one idea... I wanted it [my email] proofread by a smart person or a person with knowledge about how emails are made.” RC5 further highlights that a knowledgeable person was preferred when given the opportunity.

Finally, returning citizens preferred any support from people who were willing to help. For example, when asked how you currently obtain assistance for digital literacy, RC7 stated:

...where do I get it [help] from? Uh, [redacted community college], the library, uh, the tutors there. Okay. The people at PNC Bank. Okay. Everybody that know me, know what it is. So anybody, anyone, my laptop is here now, everywhere I go, I’ll leave here and go to Starbucks and whoever near me, [I’ll say], ‘excuse me, can you show me?’ And then that’s that, you know.

RC2, echoed a similar sentiment when he said,

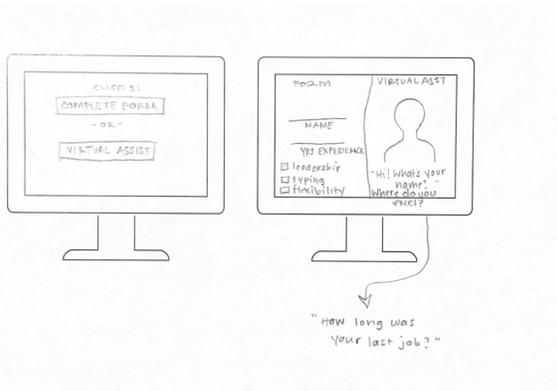
Yes. Uh, her friend (SS1), [SS8] says help me...the girl right across around the corner who works at the Dollar General has helped me a little bit.

I’ve been to about four [redacted] public libraries where I get a little help there....But you know, the librarian, they can’t devote all of their time just to you....So I get a little help here and there, but I, I want somebody who could sit down with me.

It should be noted both of these participants did not have familial social support closely available, which may have been the reason they turned to strangers. Overall, while technology changes rapidly, returning citizens preferences for human support are a reminder of the importance of creating systems that enable and promote authentic human connection that promote empathy and understanding of the life experiences of returning citizens.

## 5 Discussion

Despite previous research about returning citizens’ interactions with technology [10, 17, 18, 26, 27, 41, 48, 56–58, 60, 61, 64, 68], ours is the first study to understand preferences of returning citizens as it relates to content and specific features that would be most helpful to this populations using their current strategy of navigating job search with their support systems. Our findings first

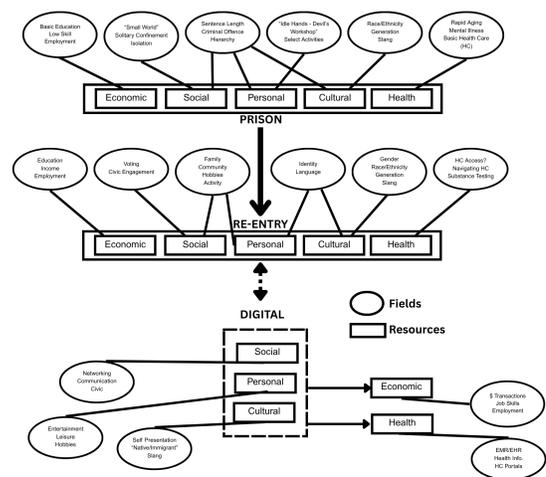


**Figure 5: Image of virtual interviewer made together with a returning citizen and social support pair. On the left of the image is a computer screen where a person can complete the form using text entry or a virtual assistant. On the right side is the virtual assistant beside the application form. The virtual assistant is saying, "Hi! What's your name? Where do you excel? How long was your last job?"**

confirm previous literature focused on high-level issues: Returning citizens do, indeed, face an additional layer of challenge with re-entry because of challenges with basic digital literacy and the widespread digitization of job search itself [57, 58, 68]; our participants all had good access to smartphones [10, 26, 48]; members of their social support play a significant role in digital support, as well [10, 26, 47, 48, 60, 61]; and returning citizens appreciate job information targeted specifically for them [64].

However, we also found specific technology requests that partly echoed previous literature related to digital job search for other groups. As with others who conduct job-search tasks online, returning citizens were frustrated by the repetitive and invasive nature of job applications [17, 19, 67], but we found unique responses to how to address this challenge. For example, our participants strongly emphasized the use of face-to-face human interaction or video – both for receiving information and for providing it in job applications. And, they did so even when the potential for racial discrimination was explicitly raised. They also suggested systems that would automatically fill in repetitive form fields as other work has suggested [19], but they articulated unique concerns about handling their felony status and uneven work history.

Our findings reinforce the value of Reisdorf & Rikard's [58] Digital Rehabilitation Model, and also suggest a key modification to it (See Figure 6), we provide empirical evidence that "economic, cultural, social, and personal aspects" do not have "equal footing" in the digital aspects of reentry as previously described. Instead, cultural, social, and personal aspects of reentry directly affect how digital aspects of reentry interact with the economic dimensions of reentry. Thus, when supporting returning citizens in job search on digital platforms (which is an economic activity), we found that the cultural, social, and personal aspect of a returning citizen has an impact. We also modify the Reisdorf & Rikard's [58] Digital Rehabilitation Model by emphasizing that human support is essential, even for digital hurdles. Our participants repeatedly asked to be



**Figure 6: We modify the Reisdorf & Rikard's [58] Digital Rehabilitation Model by providing empirical evidence demonstrating that the economic aspects of digital reentry cannot be considered separate from the cultural, social, and personal aspects of reentry. Thus, when supporting returning citizens in job search on digital platforms (which is an economic activity), we found that the cultural, social, and personal aspects of reentry has an impact.**

connected to a knowledgeable person when seeking help with on-line job search. Technology challenges cannot be entirely addressed with technology [65]. Our study suggests both that returning citizens are comfortable relying on family and members of civil society, and these people have deep insight into the challenges faced by returning citizens as well as tactics to mitigate them.

### 5.1 Reflections on Race

Notably, Black returning citizens, despite forming the majority of our participants, rarely raised the question of race or racism themselves. And, even when we prompted the topic of discrimination, conscious that they had experienced it routinely as critical race theory suggests [46], they chose not to dwell on it. Formerly incarcerated Black men are aware of the issues as they relate to the challenges of racism and employment discrimination, but many nevertheless persevered, often optimistically. Instead of fighting back against racist policies, systems, and institutions, most Black men returning citizens in our participant pool were fighting back by working earnestly to live their lives and to return home successfully. They were looking for jobs, they were searching for housing, they were working on their relationships, they were seeking care for their health. Overall, they were doing what was necessary to survive and hopefully thrive in life.

We also found that despite scenarios and discussion prompts that specifically introduced the topic of race, our participants did not suggest any technology features to address discrimination explicitly. It is unclear whether this was due to an inability to imagine such features or out of a sense of dignity – that seeking to counter bias would be tantamount to seeking an unnecessary advantage. Thus, in

our recommendations, we follow the lead of our returning citizens participants and avoid technology features that might specifically address racial discrimination. This is not, however, to suggest that racial discrimination is either absent in job search (it is very real [50, 51]) or that it should not be addressed at a systemic level (it should!).

## 5.2 Implications for Design

Above all, our returning citizen participants sought more human engagement: They would prefer to hear about jobs in person, apply to jobs in person, and receive support in the job search process itself in person. However, they were also realistic about such expectations and voiced technology solutions, which we present below. In doing so, however, we caution that our technical solutions should be considered secondary to offering more human support throughout, as others have suggested in other contexts [5, 65].

The two areas that emerged clearly where technical design could support returning citizens with job search were with respect to gaining information about critical topics such as digital literacy or job search and applying to jobs, especially when it comes to form-filling. These recommendations come from the combination of returning citizens' desire to bypass markers of stigma or bias and – in some cases – their limited text literacy.

First, many of our participants wanted alternate means to learn about jobs and the requirements of potential jobs. Video was emphasized, presumably because they were more comfortable absorbing information in non-text forms. They also suggested that videos could have more diversity in representation, including those with a criminal past. These findings echo previous research that suggests that videos can encourage engagement with technology among novice technology users [11, 43].

Second, recording audio or video for inputting job-application data would be helpful. Our participants consistently mentioned that they were more comfortable presenting themselves through speech than written text.

But, if text-based forms cannot be avoided, an automated form-filling technology that expands what many state-of-the-art web browsers already do (e.g., with addresses and credit card information) is desired. Users might fill out one general form that contains common job application fields, and subsequent forms would be filled out automatically. Such a system could also be the site of specific guidance or revision for returning citizens – using functional resumes, working around felony disclosure, etc.

## 5.3 Limitations

This paper builds on previous research involving returning citizens [47] and social support members [45]. In this study, we brought both groups together to brainstorm and discuss design ideas regarding digital literacy challenges faced during job searches. However, this study is not without limitations. Below, we outline these limitations in relation to our methodology and recruitment strategy.

First, our use of focus groups may have influenced participants' willingness to fully share their experiences. Although the moderator encouraged participation whenever she observed silence, some participants—such as the one White man participant—may have felt hesitant speaking openly, particularly during conversations about race and ethnicity. To mitigate this, we emphasized throughout the

consent process that participants were free to engage only with aspects of the study they felt comfortable discussing.

Second, our sample size was relatively small and limited to the Greater Detroit area. While this enabled deep community engagement, it may limit the generalizability of our findings to other regions or reentry populations. Nevertheless, participants benefited from sharing the same geographic region, allowing them to discuss specific local topics such as zip code discrimination and transportation.

Third, our recruitment strategy involved snowball sampling and partnering with a nonprofit focused on returning citizens. Formerly incarcerated individuals are a hard-to-reach population; therefore, our initial open recruitment strategy was less successful without the support of a partner organization. This means that we were less likely to recruit individuals not linked to an organization or supportive family member. As a result, our results may skew optimistic and reality may be more challenging for other returning citizens.

Finally, while our study focused on co-designing job search tools, we did not focus on algorithmic systems that are increasingly shaping employment outcomes (e.g., resume screeners, automated job matching platforms). These systems have profound implications for access and equity despite working behind the scenes. Future research might extend our findings by exploring how returning citizens interact with these systems and how collaborative design approaches could support the development of more transparent and just algorithmic systems.

## 6 Conclusion

Ultimately, what returning citizens need in the context of job search are good jobs. Without employers being open to hiring returning citizens, formerly incarcerated individuals will continue to face great challenges. Advocacy and good policy remain essential for returning citizens re-entering an increasingly digital society. Our research thus represents a small effort in this larger context, in which we sought to better understand how returning citizens engage with digital job search.

Future work could build on the work in this study by designing, developing, and evaluating digital tools to aid returning citizens' job search, with one possibility being a system – possibly a mobile-friendly browser add-on – to assist with job-application form completion. Other work could consider the potential for video-based job application processes, and to examine their overall effect on bias.

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