

5-2023

## Examining The Relationship Between Technological Skills and Success In Higher Education Among Formerly Incarcerated Individuals

Ebony Cubias

*California State University - San Bernardino*

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd>

 Part of the [Social Work Commons](#)

---

### Recommended Citation

Cubias, Ebony, "Examining The Relationship Between Technological Skills and Success In Higher Education Among Formerly Incarcerated Individuals" (2023). *Electronic Theses, Projects, and Dissertations*. 1691.

<https://scholarworks.lib.csusb.edu/etd/1691>

This Project is brought to you for free and open access by the Office of Graduate Studies at CSUSB ScholarWorks. It has been accepted for inclusion in Electronic Theses, Projects, and Dissertations by an authorized administrator of CSUSB ScholarWorks. For more information, please contact [scholarworks@csusb.edu](mailto:scholarworks@csusb.edu).

EXAMINING THE RELATIONSHIP BETWEEN TECHNOLOGICAL SKILLS AND  
SUCCESS IN HIGHER EDUCATION AMONG FORMERLY INCARCERATED  
INDIVIDUALS

---

A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Social Work

---

by  
Ebony Cubias  
May 2023

EXAMINING THE RELATIONSHIP BETWEEN TECHNOLOGICAL SKILLS AND  
SUCCESS IN HIGHER EDUCATION AMONG FORMERLY INCARCERATED  
INDIVIDUALS

---

A Project  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

by  
Ebony Cubias  
May 2023  
Approved by:

Dr. Caroline Lim, Faculty Supervisor, Social Work

Dr. Yawen Lee, M.S.W. Research Coordinator

© 2023 Ebony Cubias

## ABSTRACT

**Background and purpose:** Research has tended to focus on the outcomes of how digital inclusion for incarcerated individuals has helped reduce the rate of recidivism rather than the success rate in higher education for formerly incarcerated individuals. This study was implemented to examine the relationship between technological skills and academic achievement amongst formerly incarcerated individuals in higher education. **Methods:** This observational study used cross-sectional data from participants recruited from Project Rebound in a CSU. Participants were recruited using purposive sampling method. Students who participated were over the age of 18, formerly incarcerated. Participants completed a self-report technological skill survey. The proficiency level of specific technology applications and computer skills was assessed using a self-report scale, giving the possible responses which ranged from poor to excellent. The participants' academic achievement was measured by having the participant input their GPA level. The self-report survey will be used to examine the relationship between technological skills and academic achievement. **Results:** The study sample featured 27 participants that were formerly incarcerated in the Project Rebound program in California State University San Bernardino. Participants ages ranged from 29 to 58 years ( $SD=8.0$ ). Males formed the majority of participants in this study sample. Overall, participants were excelling academically as evidenced by the high average GPA in this sample. The data

results revealed a statistically insignificant weak positive correlation between participants' technological skills and academic achievement. **Conclusion:** Despite the statistically insignificant findings, the positive correlation between technological skills and academic achievement suggest the need for programs serving formerly incarcerated individuals to take into account this other aspect of need.

## ACKNOWLEDGEMENTS

I am grateful to Dr. Caroline, my research supervisor, for her guidance in helping me through the process of formulating my ideas and seeing the research and data come to fruition. I am grateful for those who have helped me this year to successfully complete this project.

## TABLE OF CONTENTS

ABSTRACT .....	iii
ACKNOWLEDGEMENTS.....	v
LIST OF TABLES .....	viii
LIST OF FIGURES .....	ix
CHAPTER ONE: PROBLEM FORMULATION .....	1
Introduction.....	1
Population of Incarcerated Individuals.....	1
Declining Imprisonment Rate.....	2
Higher Education Access.....	3
Programs.....	4
Conclusion.....	7
CHAPTER TWO: LITERATURE REVIEW.....	8
Digital Inclusion for Incarcerated Individual Outcome .....	8
Reasons for Digital Exclusion .....	8
Digital Inclusion and Recidivism .....	9
Digital Inclusion and Higher Education .....	10
Gaps in Research.....	10
Research Question.....	11
Theory Application.....	11
Significance of Study .....	12
CHAPTER THREE: METHODS .....	13
Study Design .....	13



Setting .....	13
Participants.....	13
Recruitment.....	14
Study Procedure.....	14
Measures.....	14
Demographics Characteristics .....	14
Technological Skills .....	15
Academic Achievement .....	15
Statistical Analyses.....	15
CHAPTER FOUR: RESULTS.....	17
Descriptive Statistics .....	17
Demographic Characteristics.....	17
Technological Skills .....	18
Academic Achievement .....	19
Correlation Analyses.....	21
CHAPTER FIVE: DISCUSSION .....	24
Limitations .....	25
Conclusion.....	25
APPENDIX A: IRB APPROVAL LETTER .....	27
APPENDIX B: RESEARCH SURVEY .....	30
REFERENCES.....	42

## LIST OF TABLES

Table 1. Descriptive Statistics of Participants Demographic Characteristics .....	17
Table 2. Descriptive Statistic of Participants Technological Skills and Academic Acheivement.....	20

LIST OF FIGURES

Figure 1. Imprisonment rate per 100,000 U.S residents, by age, 2010-2020 ..... 3

Figure 2. Degrees Conferred to Formerly Incarcerated Individuals between 2016 and 2021.. ..... 5

Figure 3. Academic Achievement by Technological Skills..... 22

Figure 4. Academic Achievement by a Subset of Technological skills . ..... 23

## CHAPTER ONE:

### PROBLEM FORMULATION

#### Introduction

Although pursuing higher education is advantageous to formerly incarcerated individuals in hindering their reentry into the prison system, a major barrier is their limited technological skills (Murillo, 2021), which are necessary for the successful navigation of the higher education system. This chapter will explore the challenges that formerly incarcerated individuals in California face in higher education, the size of the formerly Incarcerated population, and how accessible higher education is for the formerly incarcerated population.

#### Population of Incarcerated Individuals

Incarcerated individuals refer to persons who are serving a sentence in a prison, jail, or correctional facility after being convicted of a criminal offense. The United States has the highest concentration of incarcerated individuals in the world. There are currently 2 million individuals confined within prisons in the United States. In 2020, this country has 2.3 million incarcerated individuals compared to 1.6 million in China and 527,000 in Russia despite the larger population. One out of five incarcerated people in the world is incarcerated in the

United States. At the start of the pandemic, the United States had 2.3 million incarcerated individuals compared to China's 1.6 million, and Russia had only 527,000 incarcerated population. Within California there is currently 98, 472 inmates in correctional facilities (The California Department of Corrections, 2022).

The demographic characteristics of incarcerated individuals show the percentage of race and ethnicity. Approximately 38% of incarcerated individuals are Whites, 38% African Americans, 21% Latinos, and 2% Native Americans. The majority of people in state prisons identify as male (93%) and 7% identify as female (Sawyer, 2022).

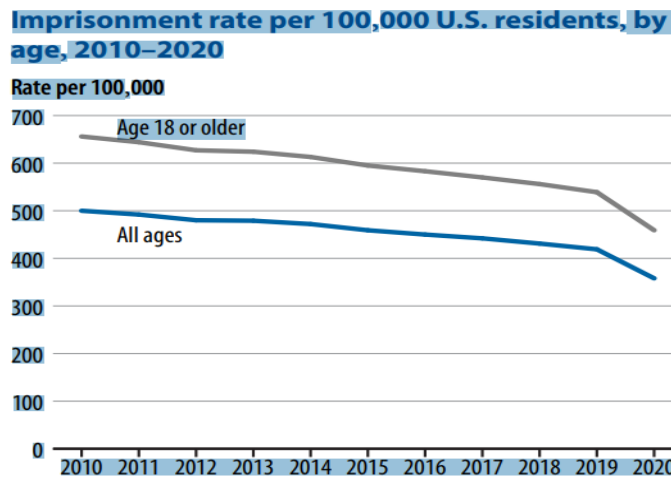
#### Declining Imprisonment Rate

Despite the high number of incarcerated individuals in the United States, the imprisonment rate is decreasing. For example, the prison population in California, declined by more than 33% between 2019 and 2020 (Carson, 2021). Figure 1 displays the imprisonment decrease rate between 2010- 2020 for the minority groups such as African Americans, Latinos and Native Americans in the United States. Based on these statistics, it's clear that imprisonment rates have gone down for minority groups, especially African Americans and Hispanics. Consequently, there are many more individuals who have been released during the last two years due to past events such as Covid-19. The decline in the imprisonment rate can be explained by several factors. First, the justice system released more individuals especially during the pandemic, to limit the spread of

COVID. The shutdown of the courts during the pandemic also contributed to the recent decline in prisons because of the delay in trials and sentencing for each person (Carson, 2021).

Figure 1

*Imprisonment rate per 100,000 U.S. residents, by age, 2010-2020*



Note. The figure was produced using statistics reported by Bureau of Justice statistics

### Higher Education Access

As the number of individuals who are being released from the prison system increases, the need to integrate the growing population of formerly incarcerated individuals became more urgent. One method of integration is

providing formerly incarcerated individuals the opportunity to enroll in higher education. Bozick et al. (2018) have found within the study that incarcerated individuals who received correctional education have 12% better odds of obtaining post-release compared to those who have not. Bozick et al. (2018) also suggest that incarcerated individuals that participate in educational programs have different traits such as becoming more motivated and proactively planning their future when released.

Presently, at least 1,000 formerly incarcerated students are estimated to be enrolled in California Community Colleges (CCC), California State University (CSU), or University of California (UC) campuses (Murillo, 2021). To ensure their successful navigation of the higher education system, formerly incarcerated students should be offered the necessary support such as technology.

#### Programs.

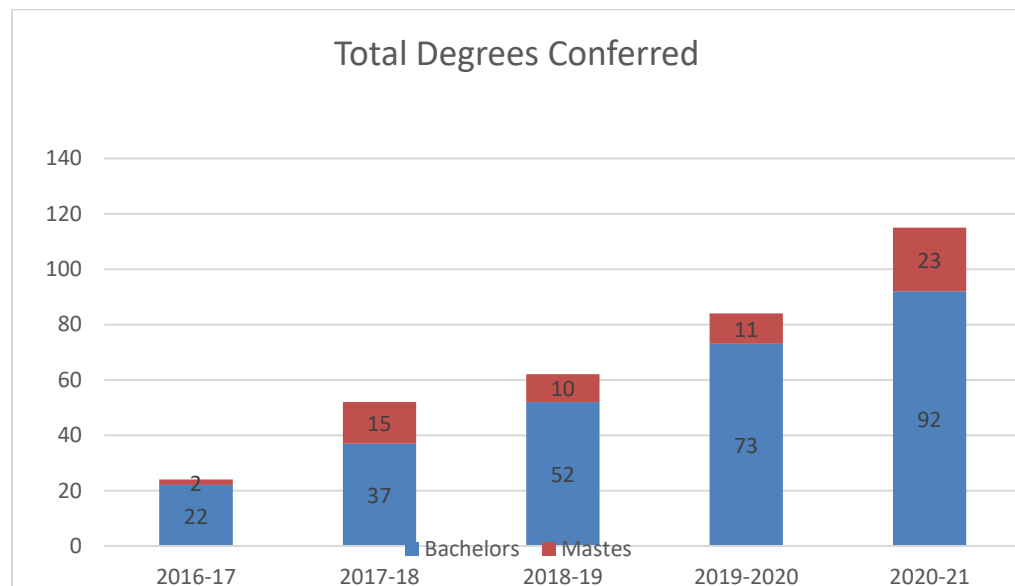
Programs have been developed to provide formerly incarcerated individuals with resources to increase their chances of success in higher education. Project Rebound and Securus Technologies Lantern are two examples.

Project Rebound was created with the intention of supporting the higher education of formerly incarcerated individuals who choose to enroll in a CSU. The program is offered on 14 CSU campuses as of today (CSU, n.d.). Project Rebound provides support in preparing and applying to CSU and follows up with students throughout their academic journey. The program refers students to

useful resources on campus and guides them through any challenges that may cause a hindrance to their success in higher education. With the development of Project Rebound, the number of degrees conferred to formerly incarcerated students enrolled in CSU increased between 2016 and 2021, from about 20 to over 100 (see Figure 2)

Figure 2

*Degrees Conferred to Formerly Incarcerated Individuals between 2016 and 2021.*



*Note.* The figure was produced using statistics reported by Heiner et al. (2021)

This program can be seen as a vital intervention for digital inclusion among formerly incarcerated students enrolled in higher education. The program



provides guidance to students who wish to enroll in a CSU by going through the process of how to navigate certain websites, creating accounts to keep track of their progress, how to navigate through their school account when enrolled and how to enroll in courses for each semester/quarter. Project Rebound has shown that formerly incarcerated individuals are more likely to successfully reintegrate into society and finish higher education if they receive support with technology and other barriers (CSU,n.d).

Securus Technologies was developed to provide formerly incarcerated individuals with technological skills as they serve their prison sentences. Securus Technologies is a company that focuses on providing technical resources to improve and transform incarcerated individuals' lives. Securus Lantern offers a full-service education platform with the capability to support the college, high school equivalency prep, GED prep, adult basic education, and vocational courses (Securus Technologies, n.d.). Securus's educational courses are online and accessible using tablets, and focus on equipping incarcerated individuals with navigating and learning skills such as employment opportunities and personal development. This program goal is digitally including formerly incarcerated individuals before they are released from their sentence. Being able to navigate through the tablet and completing modules for their courses can help maximize formerly incarcerated individuals' adjustment to CSUs' and community colleges' heavier reliance on applications.

With the interventions of Project Rebound and the Securus Technologies Lantern, there may be a chance for improvement in the success rate of formerly incarcerated individuals that are within higher education when given prior technical skills when in prison and support outside of prison.

### Conclusion

Technology has been rapidly evolving and being utilized more than ever in recent years. With the new dependency on technology, having limited technological skills, also referred to as being digitally excluded, can affect formerly incarcerated individuals to return to higher education. For a majority of individuals that have been in prison for more than a year, they have missed the recent updates on the types of technology that are used in daily life such as computer software, phone apps, emails, and signing up for items digitally and much more. To maximize formerly incarcerated individual's chances of enrolling in higher education, research is needed to understand how digital inclusion before being released can improve their academic achievement when enrolled in higher education.

## CHAPTER TWO:

### LITERATURE REVIEW

The purpose of this chapter is twofold. First, to review the literature on outcomes and limitations of digital inclusion for incarcerated individuals, and the benefits of higher education for incarcerated individuals. Second, It will discuss the gap within the literature that will be reviewed and how the present study strives to fill this gap.

#### Digital Inclusion for Incarcerated Individual Outcome

Digital inclusion can be described as ensuring that the internet and digital technologies are available to everyone (Jewkes et al., 2016). However, certain communities and populations, such as incarcerated individuals, are digitally excluded. An outcome of digital exclusion is the fear and anxieties that come with confronting and learning the new media, which is necessary for rehabilitation (Jewkes et al., 2016). Cerdeira et al. (2021) suggest that being digitally competent in a digital world is useful for navigating the world and increasing overall life opportunities.

#### Reasons for Digital Exclusion

Research has been conducted to explain digital exclusion amongst incarcerated individuals (Jewkes et al., 2016, Cerdeira et al.,2021). Research found that digital access was restricted among incarcerated individuals due to security and prison officials were concerned that inmates would have the means

to conduct illegal activities with technological devices and in turn, compromise the security of the entire prison (Jewkes et al., 2016). Another factor that determined the extent of digital inclusion for inmates is prison officials' perception of the benefits of technology and work experience. A survey of 70 prison officials found that those who worked in prisons where inmates had more technology access were more likely to perceive technology to have a positive impact on inmates (Mufarreh et al., 2021). Moreover, Jewkes et al. (2016) have suggested that due to issues of privacy, personal security, and exertion of control by the prison officials, prisoners had decided to pass the chance of using the technology offered. For example, an implementation of the skype app within certain prisons found that there were mixed reviews as it was seen as very limited access. A few inmates mentioned that they would have to replace their in-person visitations with Skype visits while others stated that they were given a 15-minute limit to each session (Jewkes et al. 2016). Therefore, inmates didn't see a benefit to replacing their in-person visit with a Skype call thus decreasing the incentive to be digitally included.

### Digital Inclusion and Recidivism

Recidivism can be described as an individual who has served time and has reoffended. Studies have found that more digital inclusion participation during the prison sentence had a positive impact on the inmate's motivation and aspirations which can result in more successful future (Mcdougall et al., 2017; Jewkes et al., 2016). For example, in a survey conducted with 76 prisoners after

the installation of the Prisoner self-service kiosk found that prisoners were becoming more familiar with modern digital technology which had a direct impact on activities that relate to rehabilitation (Mcdougall et al.,2017). Jewkes et al. (2016) have suggested that the lack of digital inclusion could become detrimental for incarcerated individuals. The tutors that teach prisoners the basic skills with computer software are still very limited in what the tutors are given within the prison classroom (Jewkes et al., 2016). In summary, Jewkes et al. (2016) mention that even though there is some technology use being taught to the prisoners it is scratching the surface of what can be taught.

#### Digital Inclusion and Higher Education

Studies have found that digital inclusion with higher education learning has had a positive impact on incarcerated individuals as they learn more skills that can be used for future employment opportunities and gave them more hope for their future (Jewkes et al. 2016). Therefore, this study shows that when incarcerated individuals are given the opportunity they become more hopeful to a better future.

#### Gaps in Research

It is unknown whether digital inclusion will result in the success of higher education for formerly incarcerated individuals due to the lack of research. The research has tended to focus more on the outcomes of how digital inclusion for incarcerated individuals has helped reduce the rate of recidivism rather than the

success rate in higher education for formerly incarcerated individuals (Mcdougall et al., 2017; Bradley et al., 2021; Reisdorf et al. 2021). However, there has not been many research studies on the relationship between technological skills in formerly incarcerated individuals and how successful they are in higher education. Moreover, previous research has been limited to digital inclusion and higher education for individuals that were incarcerated rather than formerly incarcerated. This research can further delve into the technological barriers that formerly incarcerated individuals may come across when entering higher education.

#### Research Question

The aim of this study was to investigate the relationship between the level of technological skills and the success of formerly incarcerated individuals in higher education. The study hypothesized that the students with higher technological skills will have higher academic achievement.

#### Theory Application

The connectivism learning theory can be described as a framework that views learning as being influenced by technology and socialization (Goldie, 2016). The connectivism learning theory assumes that connections help facilitate learning, up-to-date knowledge is the aim for learning activities, and learning may depend on non-human appliances. The Connectivism learning theory helps guide

the research question as it focuses on the importance of teaching and learning through the use of digital technologies (Goldie, 2016). Guided by these theories, the study hypothesizes that students with higher technological skills will have higher academic achievement.

### Significance of Study

This data can potentially be used by universities and community colleges to enhance formerly incarcerated students' success rate at their institutions by providing more technological resources to those that may have recently begun their educational journey. Examining the relationship between these two factors can also reveal the barriers formerly incarcerated individuals may face when continuing or beginning their higher education. Additionally, it may be beneficial to the social work profession as it can potentially develop more knowledge on how to help a vulnerable population gain equal opportunities when given the proper resources. Social workers that work within the Justice system can benefit from this research as they can learn more about what resources may be helpful for individuals that have been released and wish to begin their higher education.

## CHAPTER THREE:

### METHODS

#### Study Design

This observational study used cross-sectional data gathered from students participating in the Project Rebound Program.

#### Setting

Project Rebound has been used for the recruitment site. This program serves formerly incarcerated individuals.

#### Participants

Eligible clients were individuals who were 18 or older; had been formerly incarcerated; were part of the Project Rebound program; and could read or speak English. Study participation was limited to clients who were formerly incarcerated students because they represent the population that the research study aims to focus on and are the predominant clients the agency serves that have been selected for study involvement. Students that were not part of the Project Rebound program were excluded from participating.



## Recruitment

Participants were recruited by purposive sampling from the participating Project Rebound program. Students who chose to participate completed a verification if they were over the age of 18 and if they were formerly incarcerated. Those that met the criteria were given the informed consent and able to continue the survey.

## Study Procedure

Participants completed a self-report technological skill survey. The survey overall took at least 15 to 20 minutes in one sitting. The survey was completely anonymous and did not collect any information that would be able to identify the participants. Participants completed the survey online using the link provided through email or utilizing the QR code attached to the research flyer using any type of technology device that supports the survey. The study protocol was approved by the university's institutional review board and the program director of one of the Project Rebound's in the CSU's.

## Measures

### Demographics Characteristics

The demographics that were collected in this study include the participants race/ethnicities which include if they are white, African American, Hispanic, and other. The participants were also asked to input their age, gender, academic

major and educational level. The participants were asked to choose which gender they identified with, or they had the option to choose not respond. The options that they were given to determine what their education level is if they were undergraduate, graduate and doctorate level.

### Technological Skills

The proficiency level of specific technology applications and computer skills was assessed using a self-report scale, giving the possible responses which ranged from (1) poor to excellent (5). Participants were asked to rate their level of proficiency in using Word document, Email, PowerPoint, typing, Zoom, Google drive, Saving, Google docs and Canvas before entering school.

### Academic Achievement

The participants' academic achievement was measured by having the participant input their GPA score. The participants had an open response choice to be able to input their GPA score.

### Statistical Analyses

Descriptive statistics (mean, standard deviation, range, frequencies, percentages) were derived to describe the participants' demographic characteristics, Technological Skills, and Academic Achievement. Percentages and frequencies were derived for categorical variables, and measures of central tendency and variability were derived for continuous variables. The relationship between participants' technological skills and academic achievement was investigated using a Pearson product-moment correlation coefficient. Scatterplots

were generated to check for the relationship between the variables. Analyses were conducted using IBM SPSS 28.0, and statistical significance was set at  $p < .05$ .

## CHAPTER FOUR:

### RESULTS

#### Descriptive Statistics

##### Demographic Characteristics

Table 1 displays the samples demographics. The average age of the sample was 42.7 years (SD = 8.0, range = 29–58). The standard deviation suggests that the participants come from a moderate range of ages. Males formed the majority of participants in this study sample ( $n = 15, 55.56\%$ ). White/Caucasian individuals formed the majority of participants in this study sample ( $n=11, 40.74\%$ ). One-third of the participants reported that their academic major as Social work ( $n= 12, 44.44\%$ ). The majority of participants reported that their educational level was undergraduate ( $n=16, 59.26\%$ ).

**Table 1 Descriptive Statistics of Participants' Demographic Characteristics**

**(N = 27)**

Variable	<i>n</i> (%)
Age, <i>M</i> ( <i>SD</i> )	42.7 (8.0)
Gender	
Male	15 (55.56)
Female	12 (44.44)
Race and Ethnicity	
White	11 (40.74)

Hispanic	10 (37.04)
African American	3 (11.11)
Other <sup>a</sup>	3 (11.11)
Academic Major	
Social work	12 (44.44)
Other	8 (29.63)
Sociology	5 (18.52)
Psychology	2 (7.41)
Education Level	
Undergraduate	16 (59.26)
Graduate	11 (40.74)

---

<sup>a</sup>Other comprise American Indian/Native American & Native Hawaiian/Pacific Islander

### Technological Skills

Table 2 displays the samples technological skills and academic achievement. There was an even distribution of participants' who reported that their technological skills before entering school were good ( $n = 10, 37.04\%$ ), very good, or excellent ( $n=10, 37.04\%$ ). Majority of participants reported that their skills in Word document were very good and excellent ( $n=14, 51.85\%$ ). Similarly, the majority of participants reported that their skills in working with email were very good and excellent ( $n=15, 55.56\%$ ). One in three of participants reported that their skills in PowerPoint were poor and fair ( $n=11, 40.74\%$ ). There was an even distribution of participants who reported that their typing skills were good, very good, and excellent ( $n=11, 40.79\%$ ). One-third of participants reported that their skills in Zoom were poor and fair ( $n=10, 37.04\%$ ). Majority of participants

reported that their skills in using Google Drive were poor and fair ( $n=14$ , 51.85%). One in three of participants reported that their skills in saving items were very good and excellent ( $n=15$ , 55.56%). There was an even distribution of participants who reported their skills in Google docs were poor, fair, very good, and excellent ( $n=10$ , 37.04%). Majority of participants reported that their skills in Canvas were poor and fair ( $n=16$ , 59.26%). Overall, the participants were most proficient in the Canvas application.

### Academic Achievement

The average GPA score of the sample was 3.7 ( $SD=.3$ , range = 2.8-4.0). Among undergraduate students, the GPA score was 3.7( $SD=.2$ , range =.8). Among graduate students, the average score was 3.6( $SD=.4$ , range =1.2). Participants' GPA scores were compared by racial and ethnic groups. Findings from an independent-samples t-test reveal that White participants, in general, had higher GPA scores compared to minority participants,  $t(23) = -2.40$ ,  $p = .028$ . This difference is statistically significant. This difference was found to have a medium effect.

**Table 2**  
**Descriptive Statistics of Participants' Technological Skills and Academic Achievement (N = 27)**

Variable	<i>n</i> (%)
Technological Skills Before school	
Poor and fair	7 (25.93)
Good	10 (37.04)
Very good and excellent	10 (37.04)
Word Document	
Poor and fair	7 (25.93)
Good	6 (22.22)
Very good and excellent	14 (51.85)
Email	
Poor and fair	7 (25.93)
Good	5 (18.52)
Very good and excellent	15 (55.56)
PowerPoint	
Poor and fair	11 (40.74)
Good	7 (25.93)
Very good and excellent	9 (33.33)
Typing	
Poor and fair	5 (18.52)
Good	11 (40.74)
Very good and excellent	11 (40.74)
Zoom	
Poor and fair	10 (37.04)
Good	8 (29.63)
Very good and excellent	9 (33.33)
Google Drive	
Poor and fair	14 (51.85)
Good	7 (25.93)
Very good and excellent	6 (22.22)
Saving	
Poor and fair	4 (14.81)
Good	8 (29.63)
Very good and excellent	15 (55.56)
Google Docs	
Poor and fair	10 (37.04)

Good	7 (25.93)
Very good and excellent	10 (37.04)
Canvas	
Poor and fair	16 (59.26)
Good	6 (22.22)
Very good and excellent	5 (18.52)
GPA Score, <i>M (SD)</i>	3.7(.3)

---

<sup>a</sup>Technological skills were assessed with self-reported items

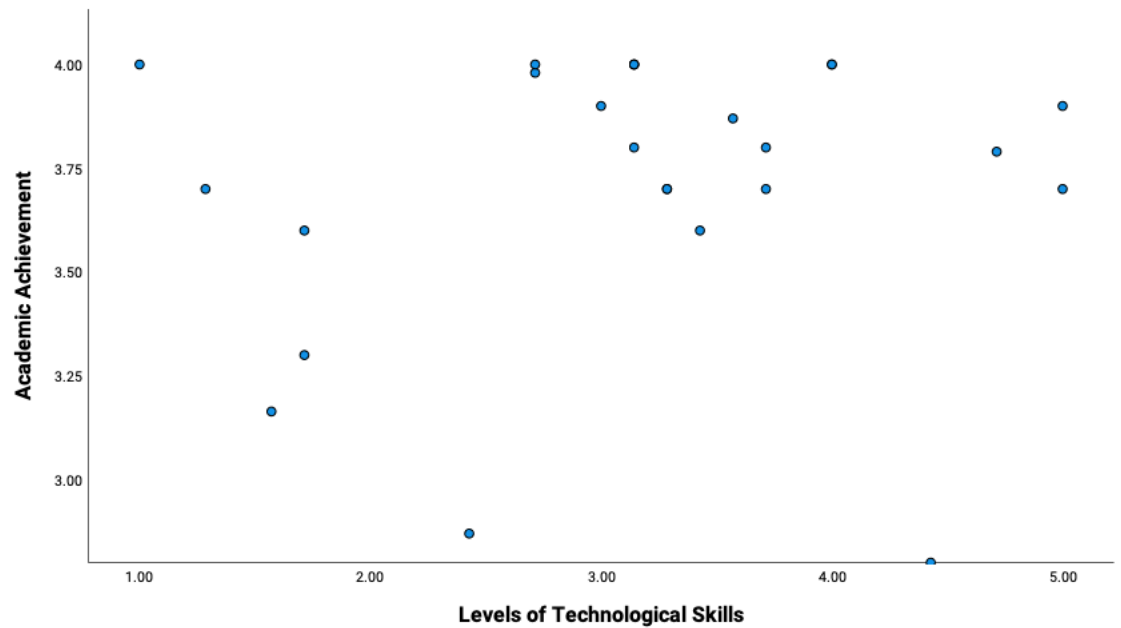
### Correlation Analyses

A scatterplot depicting the relationship between academic achievement and technological skills is displayed below. Finding from a correlation analysis indicate a weak positive correlation between levels of technological skills and academic achievement,  $r = .11$ ,  $n = 25$ ,  $p < .59$ , with higher levels of technological skills associated with higher levels of academic achievement. The correlation coefficient is statistically nonsignificant.



Figure 3

*Academic achievement by levels of Technological skills*



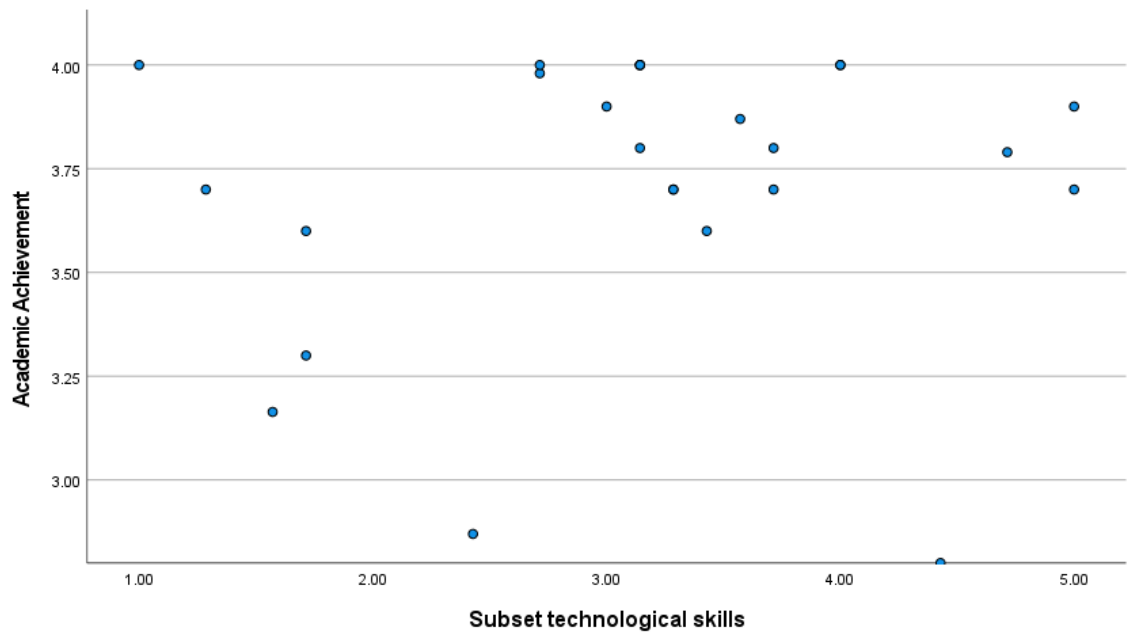
*Note.* The figure was produced using SPSS

A scatterplot depicting the relationship between academic achievement and a subset of technological skills is displayed below. The subset of technological skills comprised of Canvas, Zoom, Typing, Word Document, Email, PowerPoint, and saving. Finding from a correlation analysis indicate a weak

positive correlation between levels of technological skills and academic achievement,  $r = .11$ ,  $n = 25$ ,  $p < .53$ , with higher levels of the subset technological skills associated with higher levels of academic achievement. The correlation coefficient is statistically nonsignificant.

Figure 4

*Academic achievement by Subset of technological skills*



Note. The figure was produced using SPSS

## CHAPTER FIVE:

### DISCUSSION

This research study investigated the relationship between the level of technological skills and the success of formerly incarcerated individuals in higher education at Project Rebound.

Overall, the data suggest a statistically insignificant weak positive correlation between technological skills and academic achievement in this sample. Therefore, findings from this study did not support the hypothesis that formerly incarcerated individuals that had higher technological skills would have higher academic achievement.

Research that has been done so far on technological skills among inmates seems to suggest that increasing technological skills in this population would result in several positive outcomes such as being more prepared technology wise when released. For example, research has found that prisoners would feel more prepared when they are released if they received more training on new technological devices and applications (Jewkes et al., 2016). Findings from this study supports this body of research by showing the positive effects of technological skills and goes a bit further by looking beyond just incarceration outcomes. This study examined the academic performance that contributes to the benefits of technology for the formerly incarcerated population. The study found that even though the relationship between technological skills and

academic achievement was statistically insignificant the correlation was a positive so that as the participants technological skills increased, so did their academic achievement.

### Limitations

This study contained a variety of limitations. A limitation in this study would be that we are not able to make a generalization about the formerly incarcerated population based on the findings due to the small sample size. A second limitation is that data was only collected from one CSU that supports the Project Rebound program and the findings can not be generalized to the larger CSU system. A third limitation would be that the participants self-reported their technology skills and were not objectively surveyed. This is considered a limitation because the participants may have rated their technological skills higher or lower than they actually are.

### Conclusion

This is a quantitative study that gathered cross-sectional data from students who are part of the Project Rebound program. The aim of the study was to determine if there is a relationship between students' technological skills and their academic achievement. Findings from this study did not find a correlation between these two characteristics. Although the relationship was statistically insignificant, which can be explained by the smaller sample size, we nonetheless

found that there was a positive correlation between level of technological skills and academic achievement. The positive correlation between technological skills and academic achievements suggest that as technological skills increase, so did participants' academic achievement. This finding suggest that Project Rebound as a program they could consider offering workshops throughout the semester on different technological programs to support the students on their academic journey. Project Rebound can also consider adding a set of questions within their needs assessments to see what their students comfort level is on different technological programs to determine what workshops they can hold. Within the general prison/jail system they can consider creating courses on technology software to inmates who have been identified as having high interest for higher education to better prepare them for after they are released. A research recommendation to take into consideration could be to compensate the participants for their time. As well as retrieving a bigger sample size from the CSU'S that also support the Project Rebound program. The relationship between technological skills and academic achievement for formerly incarcerated individuals in higher education is worth investigating further in the future.

APPENDIX A:  
IRB APPROVAL LETTER

December 12, 2022

**CSUSB INSTITUTIONAL REVIEW BOARD**

Administrative/Exempt Review Determination

Status: Determined Exempt

IRB-FY2023-92

Caroline Lim Ebony Cubias  
CSBS - Social Work  
California State University, San Bernardino  
5500 University Parkway  
San Bernardino, California 92407

Dear Caroline Lim Ebony Cubias:

Your application to use human subjects, titled "Examining The Relationship Between Technological Skills And Success In Higher Education Among Formerly Incarcerated Individuals" has been reviewed and determined exempt by the Chair of the Institutional Review Board (IRB) of CSU, San Bernardino. An exempt determination means your study had met the federal requirements for exempt status under 45 CFR 46.104. The CSUSB IRB has weighed the risks and benefits of the study to ensure the protection of human participants.

This approval notice does not replace any departmental or additional campus approvals which may be required including access to CSUSB campus facilities and affiliate campuses. Investigators should consider the changing COVID-19 circumstances based on current CDC, California Department of Public Health, and campus guidance and submit appropriate protocol modifications to the IRB as needed. CSUSB campus and affiliate health screenings should be completed for all campus human research related activities. Human research activities conducted at off-campus sites should follow CDC, California Department of Public Health, and local guidance. See CSUSB's [COVID-19 Prevention Plan](#) for more information regarding campus requirements.

You are required to notify the IRB of the following as mandated by the Office of Human Research Protections (OHRP) federal regulations 45 CFR 46 and CSUSB IRB policy. The forms (modification, renewal, unanticipated/adverse event, study closure) are located in the Cayuse IRB System with instructions provided on the IRB Applications, Forms, and Submission webpage. Failure to notify the IRB of the following requirements may result in disciplinary action. The Cayuse IRB system will notify you when your protocol is due for renewal. Ensure you file your protocol renewal and continuing review form through the Cayuse IRB system to keep your protocol current and active unless you have completed your study.

- **Ensure your CITI Human Subjects Training is kept up-to-date and current throughout the study.**
- **Submit a protocol modification (change) if any changes (no matter how minor) are proposed in your study for review and approval by the IRB before being implemented in your study.**
- **Notify the IRB within 5 days of any unanticipated or adverse events are experienced by subjects during your research.**
- **Submit a study closure through the Cayuse IRB submission system once your study has ended.**

If you have any questions regarding the IRB decision, please contact Michael Gillespie, the Research Compliance Officer. Mr. Michael Gillespie can be reached by phone at (909) 537-7588, by fax at (909) 537-7028, or by email at [mgillesp@csusb.edu](mailto:mgillesp@csusb.edu). Please include your application approval number IRB-FY2023-92 in all correspondence. Any complaints you receive from participants and/or others related to your research may be directed to Mr. Gillespie.

Best of luck with your research.

Sincerely,

*King-To Yeung*

King-To Yeung, Ph.D., IRB Chair  
CSUSB Institutional Review Board

KY/MG



APPENDIX B:  
RESEARCH SURVEY

## Research Survey

---

### Start of Block: Screening

Q16 I appreciate your interest in this study. The following questions pertain to the study's inclusion criteria. Please respond to all the questions to determine your eligibility to participate in this study.

---

Q1 Are you 18 years or older?

Yes (1)

---

Q2 Are you currently attending (Redacted)?

Yes (1)

---

Q3 Are you a part of the Project Rebound program at (Redacted)?

Yes (1)

### End of Block: Screening

---

### Start of Block: Informed consent

Q4 INFORMED CONSENT

The study in which you are being asked to participate is designed to investigate the relationship between technological skills and the academic success of formerly incarcerated individuals enrolled in higher education. This study is being conducted by Ebony Cubias, a graduate student, under the supervision of Dr.

Caroline Lim, Assistant Professor of Social Work at (Redacted). This study has been approved by the Institutional Review Board, (Redacted).

**PURPOSE:** The purpose of the study is to examine the relationship between technological skills and the success rate of Formerly incarcerated individuals within higher education.

**DESCRIPTION:** You will be asked a few demographic questions in the beginning, followed by questions on how proficient you are using a variety of program and technology skills such as typing, saving files on the computer, using Word doc., PowerPoint, Google docs, etc.. As well as questions regarding your academics such as your current GPA, if you are attending class, your major, etc..

**PARTICIPATION:** Your participation in the study is voluntary. You can refuse to participate in the study or discontinue your participation at any time without any consequences.

**CONFIDENTIALITY:** Your responses will remain confidential, and data will only be reported in group statistical form only.

**DURATION:** Your participation in the study will last approximately no longer than 20 minutes. You will be asked to complete the survey only once and in one sitting.

**RISKS:** Some of the questions may make you feel uneasy or embarrassed. You may also provide sensitive and personal information. You can choose to skip or stop answering any questions that make you uncomfortable. You can also withdraw from participation at any time with no consequences.

**BENEFITS:** Participation in this study does not have direct benefits for participants. However, findings from the study will contribute to our knowledge in this area of research.

**CONTACT:** If you have any questions or concerns about this research study, please contact Dr. Caroline Lim [caroline.lim@csusb.edu](mailto:caroline.lim@csusb.edu) or 909-537-5584. You can also contact the (Redacted), Institutional Review Board at 909-537-7588.

---

Q26 CONFIRMATION STATEMENT

- Yes, I understand and give my consent (1)

End of Block: Informed consent

---

Start of Block: Block 3

Q27 Please complete this survey in one sitting. This survey should take no longer than 20 minutes to complete.

It is unlikely that you will experience any distress from answering the survey questions. However, if you become distressed during your participation in this study, please consider contacting the (Redacted) Psychological Counseling Center at (909) 537-5040.

End of Block: Block 3

---

Start of Block: Research Survey

Q13 Which gender do you identify as?

- Male (1)
- Female (2)
- Non-binary (3)
- Not Listed (4)
-

Q12 Which Race/ethnicity do you identify as?

- White (1)
  - African American (2)
  - Hispanic/ Latino (3)
  - American Indian or Native American (4)
  - Native Hawaiian or Pacific Islander (5)
  - Other (6)
- 

Q11 What is your age?

---

---

---

Q10 What is your educational level?

- Undergraduate (1)
  - Graduate (2)
  - Doctoral (3)
- 

Q9 When did you enter (Redacted) (semester and year)?

---

---

---

Q8 What is your academic major? If undeclared, write N/A

---

---

---

Q14 Current GPA : (N/A if you prefer not to say)

---

---

Q15 Are you attending classes regularly?

Yes (1)

No (2)

---

Q17 How are you performing academically in your college courses currently?

Poor (1)

Fair (2)

Good (3)

Very good (4)

Excellent (5) Q19 Before attending (Redacted), how proficient were you in using technology? (Ex: phones, tablets and computers)

Poor (1)

Fair (2)

Good (3)

Very good (4)

Excellent (5)

---

Q20 Before attending (Redacted) how proficient were you in using the program Word.Doc?

Poor (1)

Fair (2)

Good (3)

Very good (4)

Excellent (5)

---

Q18 Before attending (Redacted) how proficient were you in using Google Email?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
- 

Q17 Before attending (Redacted) how proficient were you in using the program PowerPoint?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
-



Q21 Before attending (Redacted) how proficient were you in using the program Zoom?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
- 

Q22 Before attending (Redacted) how proficient were you in typing on a computer?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
-

Q23 Before attending (Redacted) how proficient were you in using Google Drive?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
- 

Q24 Before attending (Redacted) how proficient were you in saving files on the computer?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
-

Q25 Before attending (Redacted) how proficient were you in using Google Docs?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
- 

Q26 Before attending (Redacted) how proficient were you in using the program Canvas?

- Poor (1)
  - Fair (2)
  - Good (3)
  - Very good (4)
  - Excellent (5)
- 

Q27 Are there other technology barriers you have experienced which have not been mentioned?

\_\_\_\_\_

\_\_\_\_\_

**End of Block: Research Survey**

---

**Start of Block: Block 4**

Q28 We thank you for your time spent completing this survey. If you became distressed during your participation in this study, please consider contacting the (Redacted) Psychological Counseling Center at (909) 537-5040.

## REFERENCES

- Bozick, R., Steele, J., Davis, L., & Turner, S. (2018). *Does providing inmates with education improve post release outcomes? A meta-analysis of correctional education programs in the United States*. *Journal of Experimental Criminology*, 14(3), 389-428.
- Bradley, A., & Davies, B. (2021). *Devastation and innovation: examining prison education during a national pandemic*. *Journal of Criminal Psychology*.
- California State University. (n.d.). Project Rebound. The California State University. <https://www.calstate.edu/impact-of-the-csu/student-success/project-rebound#:~:text=Project%20Rebound%20is%20a%20program,the%20California%20State%20University%E2%80%8B>.
- Carson E. (2021). Prisoners in 2021 – statistical tables. Bureau of Justice Statistics <https://bjs.ojp.gov/library/publications/prisoners-2020-statistical-tables>
- Heiner, B., Mimms, J., & Bergmann E. (2021). *A community of resilience: 2021 annual report*. The California State University, Project Rebound Consortium. [https://www.csusb.edu/sites/default/files/Project%20Rebound%20Consortium%20Annual%20Report-2021\\_0.pdf](https://www.csusb.edu/sites/default/files/Project%20Rebound%20Consortium%20Annual%20Report-2021_0.pdf)

- Jewkes, Y., & Reisdorf, B. C. (2016). *A brave new world: The problems and opportunities presented by new media technologies in prisons*. *Criminology & Criminal Justice*, 16(5), 534-551.
- McDougall, C., Pearson, D. A., Torgerson, D. J., & Garcia-Reyes, M. (2017). *The effect of digital technology on prisoner behavior and reoffending: a natural stepped-wedge design*. *Journal of Experimental Criminology*, 13(4), 455-482.
- Mufarreh, A., Waitkus, J., & Booker, T. A. (2022). *Prison official perceptions of technology in prison*. *Punishment & Society*, 24(3), 410-432.
- Murillo, D. (2021). The possibility report from prison to college degrees in California. Michelson 20MM. <https://20mm.org/2021/04/08/possibility-report-from-prison-to-college-degrees-in-california/#:~:text=As%20of%20June%202020%2C%20there,are%20studying%20at%20public%20institutions>.
- Reisdorf, B. C., DeCook, J., Foster, M., Cobbina, J., & LaCourse, A. (2021). Digital reentry: uses of and barriers to ICTs in the prisoner reentry process. *Information, Communication & Society*, 1-18.
- Rodrigues, A. L., Cerdeira, L., Machado-Taylor, M. D. L., & Alves, H. (2021). Technological skills in higher education—Different needs and different uses. *Education Sciences*, 11(7), 326.
- Sawyer, W. & Wagner, P. (2022). *Mass Incarceration: The Whole Pie 2022*. Prison Policy Initiative. <https://www.prisonpolicy.org/reports/pie2022.html>

Secure Technologies. (n.d.). Education.

<https://securustechnologies.tech/corrections/inmate-self-service/education/>

Villon. A.J, Olarte, K., Belnas, J., Saavedra, M., Keeling, M., & Mustafa, H.

(2022). Spring 2022 Populations Projections. Prison Policy Initiative.

[https://www.cdcr.ca.gov/research/wp-](https://www.cdcr.ca.gov/research/wp-content/uploads/sites/174/2022/05/Spring-2022-Population-Projections.pdf)

[content/uploads/sites/174/2022/05/Spring-2022-Population-Projections.pdf](https://www.cdcr.ca.gov/research/wp-content/uploads/sites/174/2022/05/Spring-2022-Population-Projections.pdf)