In recent years, changes in corrections policy across the country have reshaped the treatment of incarcerated populations and reduced recidivism. However, the Colorado Division of Youth Corrections is struggling to keep up with the rest of the country and has seen little improvement in the recidivism rate for the last decade. To respond, Colorado must improve the opportunities for incarcerated youth so they may gain an appropriate education and increase their employability as a result. School districts across the state have acknowledged that providing technology education is vital to ensuring employability and have adjusted their standards and programs accordingly. Education programs in short-term detention facilities in Colorado fall under the jurisdiction of the public-school district responsible for the geographic area in which they reside, and benefit from these changes. However, programs in corrections facilities, where children can live for years, are on their own and have fallen behind. This Note argues that updating the baseline education standards for the entire state of Colorado to focus on technology education and providing the necessary funding to implement such standards would better ensure that students in long-term juvenile corrections facilities do not miss out on the opportunities provided to their peers educated by public school districts. This in turn will enhance the employability of former juvenile offenders and reduce recidivism, improving the lives of these individuals and Colorado as a whole.
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INTRODUCTION

After decades of neglect, researchers and criminal justice policymakers in the United States are increasingly returning their energy and focus to the goal of rehabilitation in both the adult and juvenile justice systems.\textsuperscript{4} Rehabilitation, or the use of methods aimed at altering anti-social behavior in criminals or juvenile delinquents to more pro-social behavioral patterns, lost favor to retributivist approaches in the latter half of the 20\textsuperscript{th} century.\textsuperscript{5} Retributivist approaches are more “backward-looking,” meaning they punish offenders in order to restore a balance of justice considering only what has already occurred.\textsuperscript{6} Rehabilitation is “forward-looking,” it considers a broader range of factors and responds to crime based on what is calculated to reduce the risk of the criminal behavior from reoccurring; i.e. the risk of an offender recidivating.\textsuperscript{7}

The resurgence of retributivist policies in the 20th century—in popular culture referred to as “tough on crime”—gained prominence when critics of rehabilitative methods asserted that there was no proof that the methods actually reduced recidivism, and chose instead to focus more on what the criminal “deserved” as punishment for their crimes.\textsuperscript{8} At that time, many began to believe that criminals were incapable of change, and retributivist policies focused on simply keeping offenders away from “innocent” people (incapacitation) and scaring would-be criminals away from crime with harsh sentencing laws (deterrence).\textsuperscript{9}

The Department of Corrections for the State of California proved the starkest example of a system that embraced the shift toward retributivist policies.\textsuperscript{10} This change was shown by its adoption of longer sentences, aggressive prosecutorial discretion, and their infamous three-strikes law.\textsuperscript{11} Between the late 1970s and the early 2000s, the number of prisons in California almost tripled, and the number of prisoners per 100,000 people quintupled.\textsuperscript{12} There were some limited instances during this period where the crime rate decreased in California and the nation as a whole.\textsuperscript{13} However, many of the changes during this period likely had little or no

\textsuperscript{5} See id. at 702.
\textsuperscript{7} See id. at 725.
\textsuperscript{8} Fondacaro, supra note 4, at 704.
\textsuperscript{9} JONATHAN SIMON, MASS INCARCERATION ON TRIAL: A REMARKABLE COURT DECISION AND THE FUTURE OF PRISON’S IN AMERICA 23 (2014).
\textsuperscript{10} See id. at 19.
\textsuperscript{11} Id. at 18, 23.
\textsuperscript{12} Id. at 19–20.
\textsuperscript{13} See id. at 23.
correlation with the retributivist laws and policies instituted by the state of California, because trends towards lower crime rates often began before the enactment of such retributivist legislation.\textsuperscript{14}

While the state of California exemplified this shift, the entire nation saw substantial change during this period, including Colorado.\textsuperscript{15} However, now, in the early 21\textsuperscript{st} century, the concept of rehabilitation is regaining support.\textsuperscript{16} Novel, evidence-based, collaborative approaches have helped researchers and practitioners understand the complex causes of criminal behavior.\textsuperscript{17} This has helped them identify and implement effective interventions to encourage pro-social behaviors in the criminal population, prevent crime, and reduce recidivism around the country.\textsuperscript{18} These methods lead to predictable, measurable outcomes that reduce risk to the community upon release, providing the “proof” sought by retributivists decades before.\textsuperscript{19}

By some measures, Colorado would seem to be falling in line with the rest of the country in rolling back the policies that led to a reduction in rehabilitative models of punishment and the consequent establishment of mass incarceration.\textsuperscript{20} Like many other states, Colorado’s incarceration rates in both the adult and juvenile populations decreased since 2008.\textsuperscript{21} However, this trend does not tell the whole story. Colorado’s criminal justice system is falling behind most of the country in reducing recidivism, lamenting the third highest recidivism rate.\textsuperscript{22}

The department responsible for overseeing the incarceration of juveniles in Colorado, the Colorado Division of Youth Services (DYS), has failed to adopt effective programs and strategies in recent years. Based on the most recent data available (fiscal years 2004-2014) the recidivism rates for juveniles in their first year after release have remained largely unchanged at around 30% for the past decade.\textsuperscript{23} Data from the same period suggests that over 50% of youth released from DYS will be convicted of a new crime within three years of release.\textsuperscript{24} This data is particularly startling.

\textsuperscript{14} Id.
\textsuperscript{15} Id. at 23–24.
\textsuperscript{16} See Fondacaro, supra note 4 at 698.
\textsuperscript{17} Id.
\textsuperscript{18} See id.
\textsuperscript{19} See generally Jason Clark, Reducing Risk and Recidivism: the Texas Department of Criminal Justice Rehabilitation Programs, 75 Tex. B. J., 612, 612–15 (2012) (explaining rehabilitation programs founded on evidence based practices that have a definable outcome).
\textsuperscript{21} Id.
\textsuperscript{23} Recidivism, supra note 1.
\textsuperscript{24} Id.
considering that in 2017 the population in Colorado DYS facilities was less than half of what it was in 2005 (reduced from 1,454 to 651), the number of juveniles on probation decreased at almost the same rate (7,224 to 3,720)\(^{25}\), and the total population of all Colorado juveniles aged 10-17 increased by nearly 75,000 (519,729 to 594,505) in that time period.\(^{26}\)

These statistics demonstrate that while a juvenile’s chance of being incarcerated in Colorado has decreased significantly in the last decade, a juvenile’s chances of re-incarceration have not changed. A child in Colorado is less likely to be incarcerated, but just as likely to stay in the cycle of incarceration once exposed to it. One explanation suggested by this Note is that Colorado juvenile correctional facilities increase the gap between incarcerated individuals and their peers in terms of education and employability by relying on outdated educational goals and practices. As will be discussed below, education and employability are essential for an individual to build a legitimate life after incarceration. Neglecting these goals makes positive change for incarcerated youth needlessly more difficult before and after their release and increases their risk of recidivism.

In order for a corrections system to “correct” problem behavior patterns through rehabilitative methods, it must have the resources to uphold, at the very least, the same standards of education and life-skill training provided to the non-incarcerated population. Colorado officials could follow several paths that would allow the state to fund and implement appropriate rehabilitative initiatives to eliminate this gap. The legislature and DYS officials must harness the renewed vigor towards rehabilitation in the United States and take concerted action to work towards change. Doing so will improve the juvenile justice system and the State of Colorado by allowing juvenile offenders to safely return to their communities as productive, law-abiding members of society.

This Note proceeds in three parts. Part I discusses rehabilitation and the primary factors that influence recidivism across all ages (employment, education, and age), the barriers that the formerly incarcerated population face in respect to those areas, and how these issues apply in the context of juvenile justice specifically. Part II describes the ways in which incarcerated juveniles have far less access to technology resources and education than the general juvenile population. This finding demonstrates that systemic improvement is necessary to prevent incarcerated youth from falling further behind in terms of education and employability, exacerbating the problems that lead to recidivism.

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26. Id.
Finally, Part III proposes actions the Colorado state legislature might take to reduce the risk of recidivism for incarcerated youth.

One of the difficulties in studying the juvenile corrections population is the scant research on the subject due to many factors, including privacy concerns. This Note will use data collected on juvenile populations where possible, but adult populations in the United States will be used as an analog where research on juveniles is limited.

I. THE ROLE OF EMPLOYMENT, EDUCATION, AND AGE IN RECIDIVISM

Studies have shown that the three most determinative factors in predicting recidivism are the education level, employment prospects, and age of ex-convicts. Although employment has been found to be the most significant of these considerations, this Note begins by discussing education because it informs the employment argument as well as provides some benefits independent of employment. Age is discussed last because it is an immutable characteristic, but nevertheless supports the urgency of providing appropriate treatment to incarcerated youth.

A. How Does Education Affect Recidivism?

An ex-convict’s education level often correlates with that individual’s chances at reoffending, where higher education decreases those chances. Higher education correlates with better employment prospects upon release, which, as discussed in the next section, has the greatest impact on recidivism. A variety of significant factors work against ex-convicts in the realm of employment, so they need every possible advantage if they are to gain employment after release.

However, even when employment is taken out of the equation, education can still help reduce recidivism. Even within the first year after release when almost no ex-convicts are able to gain employment, higher education correlates with lower recidivism by comparison. Further, researchers have concluded that any form

28. Id.
29. Id.
30. Id. at 68–69.
32. Lockwood et al., supra note 27, at 66.
33. Id.
of education, whether vocational, academic, or social, can help reduce recidivism. This finding suggests that either educational programs in themselves have an effect regardless of their applicability to post-incarceration activities, or that inmates have diverse needs, and no one program produces the same benefit for all. Where program A may help one individual, it may be useless to another, who needs program B to be successful.

Education programs in facilities should reflect employment trends on the outside and be sufficiently robust to provide skills that can be translated into employment opportunities. Vocational programs historically provided a basis for reducing recidivism by teaching inmates specific trades that bolstered their employability on release. However, these programs are limited by the variety of trade programs a facility can support, so opportunities are not exhaustive. Many of these programs only offer opportunities in low-skilled labor such as maintenance and custodial work, for which demand is declining in the outside job market. Consequently, in an increasingly tech-driven economy, the efficacy of vocational programs is diminishing.

The need for a robust educational program is particularly acute in juveniles’ correctional facilities, where many incarcerated youths are of school age and nearing adulthood. For example, at Lookout Mountain Youth Services Center, Colorado’s largest juvenile commitment facility, the average age of an incarcerated youth in 2017 was 17.8. If the youth housed in these facilities are not given an education equivalent to that received by their non-incarcerated peers, their problems will only be compounded – they will be entering the job market as adults, competing with better educated peers without criminal records.

B. How Does Employment Affect Recidivism?

Studies have consistently shown that a formerly incarcerated individual’s ability to gain meaningful employment after release reduces that individual’s chances of recidivating for a host of  

35. Lockwood et al., supra note 27, at 69.
37. Id.
38. Id.
39. Id.
40. AMANDA HAYDEN, COLO. LEGIS. COUNCIL, JUVENILE JUSTICE SYSTEMS IN COLORADO 2 (2017).
reasons. Some studies suggest this is a result of the regular contact with law-abiding coworkers and the level of conformity that is required to retain a job. Employment often provides structure and an environment where there is an incentive to follow rules. Employment appears to reduce the risk of some delinquent behaviors exhibited post-incarceration as well. Some studies have shown that unemployed alleged-offenders under pretrial supervision are over five times more likely than their employed peers to have their supervised releases revoked due to non-compliance.

Beyond the simple fact of employment, ex-convicts benefit specifically from factors including career satisfaction, economic stability, limited idle time, and social ties. These factors are influenced by the nature of an individual’s employment: long-term job retention has been tied to less recidivism.

1. Barriers preventing the formerly incarcerated from gaining meaningful employment

Unfortunately, attaining employment is often the most challenging aspect of reentry into society, and almost all ex-convicts remain essentially unemployed for their first year after release. Even amongst ex-offenders who are able to find work, the majority are still classified as “working poor” due to the low wages earned at those jobs. There are many factors that together make employment for the newly-released impracticable, including legal barriers, a prospective employer’s reluctance to hire ex-convicts, an ex-convict’s limited education and experience, and out-of-date job skills.

44. Id.
46. Id.
48. Lockwood et al., supra note 27, at 67.
49. Lockwood et al., supra note 27, at 66.
51. Id. at 16–17.
a. Legal Barriers

Federal and state laws provide for limitations and prohibitions that narrow the range of opportunities for some individuals right out of the gate. Federal and state laws provide for limitations and prohibitions that narrow the range of opportunities for some individuals right out of the gate. Individuals with a felony conviction who wish to join the military, for example, can only gain entry through merit-based exceptions authorized by the branch of the armed forces the individual wishes to join. These waivers are granted sparingly, even during periods when the military is particularly in need of recruits. While there are no specific criteria required to receive a waiver, officials have noted that where these waivers have been extended, the crimes for which the individuals had been convicted were often less deplorable than the charges suggest. Given the job characteristics identified to further reduce the chances of recidivism and the nature of a career in the military, this exclusion is a particularly harsh blow to ex-convicts. Careers in the military provide a community of non-criminal peers, full time employment that ensures limited idle time especially during training, pay with bonuses and full benefits, and longevity, as most initial enlistments last for four years with the potential to reenlist.

Federal law concerning employment in federal agencies demonstrates that barriers to employment for this population are both clear and widespread. Requirements for background checks place restrictions specifically on certain classes of offenders by preventing them from gaining employment in social services, health and mental health care, daycare, education services, and other fields where there may be contact with children. This law provides that all applicants for any position in a federal agency that might involve childcare must first undergo a criminal background check. The applicant may be denied employment if they are found to have a conviction for a sex crime, a crime where the victim was a child, or a drug felony.
b. Employer Bias and Discrimination

Even when employment is legally permitted, employers often discriminate against ex-convicts, viewing a past conviction as an indication that an individual cannot be trusted. Employers often conclude that individuals with a criminal record are inherently more dangerous, and that taking on individuals with such a history could lead to future liability for negligent hiring. Some state legislatures have introduced protections for ex-convicts from discrimination in their job search by way of “ban the box” laws. These laws prevent employers from inquiring about an applicant’s criminal history at the early stages of the application process. However, the extent of the protections these laws offer varies from state to state, and particularly in Colorado they fall short in fully protecting the individual through the employment process, leaving ex-convicts vulnerable to discrimination.

Colorado does offer some “ban the box”-type protections for people with criminal records, when applying for jobs within the state, but the laws are limited. Colorado’s statute provides that recruiters for state agencies cannot perform background checks on applicants unless the applicant has been determined to be a finalist for the position or has received a conditional offer, unless that job is with the department of corrections or the department of public safety. Once the agency has authority to consider the applicant’s criminal history and has found that an individual has been convicted of a crime, the agency is tasked with weighing (1) the nature of the conviction, (2) the relation to the crime and the nature of the job, (3) information provided by the applicant pertaining to rehabilitation or good conduct and (4) the time elapsed since the conviction. An agency uses this information to determine whether that person is still eligible for the position notwithstanding the conviction.

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61. Holzer et al., supra note 52, at 1.
64. Smith, supra note 63, at 212.
67. Id. § 24-5-101(3)(b).
68. Id. § 24-5-101(4).
69. Id.
conviction as a basis for denying employment without undertaking this analysis. However, as long as the agency engaged in the mandated decision making process, the administrative decision will be upheld by the reviewing court, making it difficult to discern exactly how impactful this law is in practice.

c. Aptitude Barriers

Even if an ex-convict can overcome these barriers, they still need to demonstrate the requisite aptitude to be selected for employment over other applicants without such a background. This hurdle presents even more challenges for the ex-convict, as they will need to show educational, experiential, and personal adequacy to qualify for a position, which as discussed above in Part, they often do not receive while incarcerated. Aptitude barriers include those barriers common amongst, but not exclusive to, incarcerated populations. As discussed here, these include deficiencies in education, work experience, and socialization. Because the negative impact of limited education is discussed in depth in previous sections of this Note, only experiential and personal barriers will be discussed here.

Once released, incarcerated youth often grapple with greater experiential barriers than their peers. Institutionalized youths often come from disadvantaged family environments that lack those social ties and networking opportunities that often help non-institutionalized youths navigate employment opportunities. Additionally, on average, formerly incarcerated youth have a lower level of education which, under normal circumstances, makes job experience a valuable asset. When incarcerated, however, youths miss out on the opportunities to gain work experience and resume-building opportunities, which exacerbates the adverse effects of their experiential barriers.

Personal barriers—those that deal with relationships and socialization—have even more acute effects. Studies have shown that even when not afraid of hiring ex-convicts, potential employers often harbor biases that these individuals are deficient in the requisite social skills to be a valuable employee. This bias may be grounded partly in fact, as the Colorado Legislative Council

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71. Id.
73. Id. at 729.
74. Id.
estimates that the prevalence of mental illness in incarcerated youth may be double or triple that of the non-incarcerated population. Mental illness is defined in the report as “an alteration of thought, mood, or behavior, or any combination thereof, that interferes with some aspect of social functioning.” The report further states that “59 percent of newly committed youths require formal, professional mental health intervention.” With these added barriers and perceptions amongst employers, it is even more essential that incarcerated youth are not allowed to fall behind academically.

C. **How Does Age Affect Recidivism?**

Given that young age is a fact in youth incarceration, the most effective way to mitigate its adverse effects is to put into place effective systems that educate and prepare incarcerated youth for employment. Absent aggravating circumstances, juvenile offenders in Colorado must be released by their twenty-first birthday. Compared to adult offenders, juvenile offenders have a longer time to either live free and be a productive member of society or return to the Department of Corrections.

II. **Technology Education and Infrastructure Are Particularly Appropriate in Addressing the Factors That Influence Recidivism in Juveniles**

Science, technology, engineering, and mathematics (“STEM”) subjects, and technology in particular, are becoming more important than ever in gaining employment. As such, providing technology education and technology infrastructure to incarcerated juveniles is not only beneficial; it is necessary. For all youths—both incarcerated and non-incarcerated—technology resources broaden educational opportunities, help them stay invested in their educations, and enable them to build robust resumes with skills beyond what would be reflected in just a high school diploma. This is true for non-incarcerated youths as well, and this Section will close by discussing how public schools around the state provide these resources and opportunities.

For the purposes of this Note, technology education includes teaching students how to use different forms of technology and how to apply technology to solve problems through classes such as computer science, coding, information technology, and computer

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77. Id.
78. Id.
79. Lockwood et al., supra note 27, at 68.
programming. Technology infrastructure refers to the resources required to support technology education, such as computers, internet and other service subscriptions, and firewalls tailored to an incarcerated population.

A. How Can Technology Education and Infrastructure Help Formerly Incarcerated Youth Gain an Education?

Juvenile correctional schools in the U.S. have struggled to meet the educational needs of students and the standards set forth both by federal and state laws in their jurisdictions.81 But the problem in Colorado is particularly pronounced because of the baseline structure of the education laws discussed above. Further, the practice of providing a bare-bone education to these youth is legitimized through Section 19-2-414 of the Colorado Revised Statutes.82 This statute pertains to facility rules and academic and vocational courses, and it only mandates that schools are required to provide an education that meets these basic standards. As such, Colorado juvenile facilities can skirt liability for curriculums that do not adequately address the actual needs of the incarcerated to prevent recidivism. Specifically, some areas where correctional schools are weakest are the curriculum, the length of the school day, the hiring and retention of qualified teachers, meeting standards for instructional practices, and classroom management.83

These shortcomings can be addressed, at least in part, by developing a comprehensive education system that integrates a robust technology education and technology infrastructure.

First, technology resources can help juvenile facility schools strengthen their curriculums by enabling them to expand their course offerings in all subject areas and at all education levels through internet-based educational platforms. For example, online programs such as Odysseyware offer students access to over 300 high school classes, far exceeding the on-site capabilities of any one facility.84 Beyond high school, there are a total of 596 accredited online university programs in the U.S., including 311 offering bachelor’s degrees and 255 offering graduate level degrees or higher.85 Many more programs could become available if the infrastructure would allow including online programs that teach both high school and university curriculum.

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83. Leone & Wruble, supra note 81.
84. ODYSSEYWARE. https://www.odysseyware.com/course-map [https://perma.cc/GZH3-776Y].
Internet-based educational programs could further address the second issue—the length of the school day. Correctional facilities have struggled to allocate sufficient time to education services, but the internet never closes, so the amount of time students can access their education could grow significantly. Still, the potential here is limited. Online courses, while helpful, are less effective without instructor support.\textsuperscript{86} Both student satisfaction in online courses and successful completion of these courses is correlated to instructor involvement.\textsuperscript{87} Further, incarcerated youth are required to be under a certain level of supervision while accessing the internet, so online instruction would always require a teacher or other qualified staff member to be present on location.

However, these issues may be mitigated through the use of online programs with remote instructors. While online courses still require some instructor interaction to be effective, the scaffolding provided through many online courses reduces the student-teacher ratio necessary to provide effective instruction.

By adopting online learning programs, facilities can ensure that programs meet the required standards. Specifically, correctional schools often struggle to meet the standards imposed by federal and local law.\textsuperscript{88} This is often attributable to factors including minimal oversight from the Department of Education in the given jurisdiction, and the transient nature of students moving from home districts to detention facilities to corrections facilities and back to their home districts.\textsuperscript{89} Additionally, concerns for safety and security inhibit teachers’ ability to focus on curriculum.\textsuperscript{90} By adopting online learning programs, facilities can ensure that programs meet the required standards. Further, many of these programs are used by public schools,\textsuperscript{91} and with some programs, such as Infinite Campus, accounts are transferrable across schools to ensure continuity of service to the youth.\textsuperscript{92}

Finally, the use of technology to offer broad course selection to students in correctional facilities could help reduce behavioral issues in the classrooms and, in turn, improve classroom management. Studies have shown that boredom in the classroom increases aggression and reduces a student’s ability to control

\textsuperscript{86} Mingming Jiang et al., \textit{Effectiveness of Web-Based Learning Opportunities in a Competency-Based Program}, 5 \textsc{Int'l J. on E-Learning} 353, 357 (2006).
\textsuperscript{87} \textit{Id.}
\textsuperscript{88} Leone & Wruble, \textit{supra} note 81.
\textsuperscript{89} \textit{Id.} at 590–91.
\textsuperscript{90} \textit{Id.} at 591.
\textsuperscript{91} See \textit{e.g.}, Odysseyware, \textit{supra} note 84; Accredited Online Colleges, \textit{supra} note 85.
\textsuperscript{92} \textsc{Infinite Campus}, https://content.infinitecampus.com/sis/E.1525/documentation/school/ [https://perma.cc/2GC5-368V].
behaviors. Boredom in the classroom is caused by work that is uninteresting, not challenging, or irrelevant to a student’s life, or work that limits a student’s ability to feel like they have power over their decisions. With online programming, students have more power to choose what they work on, allowing them to select classes that they find interesting or relevant. Along with subject matter, a student’s work is paced by their progress, ensuring they are not forced to go over topics they already understand because that is where the rest of the class needs to be.

B. How Can Technology Education and Infrastructure Specifically Help Formerly Incarcerated Youth Gain Employment?

Technology Education and Infrastructure are necessary to prepare students for the modern job market. While jobs requiring skills taught through vocational programs are declining, careers related to STEM have nearly doubled in the past decade. Additionally, according to CNBC.com, five out of the top ten highest paying careers in the United States are directly related to technology specifically, and the demand for these jobs is expected to increase in the coming years. Both President Trump and President Obama have advocated for greater support for education in STEM subjects as part of initiatives to keep the United States competitive in the world market and maintaining its role as a leader in innovation. President Trump emphasized the need for education in computer science in our nation’s public schools and in particular focused on the need to provide teachers who work in underserved populations with resources to teach such subjects.

Many of the employment opportunities that relate to STEM subjects are just the types that can provide juveniles with the sort of empowering career experience that can help reduce recidivism. For example, the high pay offered by many of these jobs implies potential for financial stability. Despite the upsides of preparing

94. Id. at 28.
98. PRESIDENTIAL MEMORANDUM FOR THE SECRETARY OF EDUCATION, supra note 97.
incarcerated youth for these careers, Colorado juvenile corrections facilities are not required to provide classes in technology, and access to technology in juvenile facilities in the U.S. is often extremely limited compared to non-corrections settings. If there are more and more jobs in technology and formerly incarcerated individuals continue to be ill-equipped to perform them, they will continue to miss out on opportunities for employment, and a life without recidivism.

C. What Opportunities Do Colorado Public School Students Have to Engage with Technology?

Comparing the educational opportunities available to non-incarcerated students to those of incarcerated students is necessary to understanding how reforming the educational structure in correctional facilities can reduce recidivism. When juveniles are released, they will compete with their peers who were not incarcerated for employment and other opportunities that may prevent recidivism.

Colorado laws regarding education allow each district to develop their own curriculum and graduation requirements. The statute stipulates that a district must meet or exceed the minimum standards adopted by the Colorado state board of education to be in compliance, but there is no state standard for technology. While some of the state standards at the high school level discuss technology, none of them require significant tech use. A science standard for Earth Systems Science, for example, requires students to be able to “use specific equipment, technology, and resources such as satellite imagery, global positioning systems (GPS), global information systems (GIS), telescopes, video and image libraries, and computers to explore the universe” (emphasis added). While the standard appears to require the students to learn how to use computers and GPS for a specific purpose, they are only included as examples, where learning how to look through a telescope could equally suffice.

While not required, many public schools in Colorado, like Jefferson County, use the freedom afforded by the statute not only to offer, but require students to take technology classes in order to

100. Peter E. Leone & Pamela Cichon Wruble, Education Services in Juvenile Corrections: 40 Years of Litigation and Reform, 38 EDUCATION AND TREATMENT OF CHILDREN 4, 587 (2015).
103. Id. at 84.
Unlike DYS schools, where access to technology is severely limited, public schools in Colorado, including those that struggle under tight budgets, are able to offer their students meaningful opportunities to learn with and about technology. Many Colorado school districts, like Jefferson County, have made technology a priority with the support of their voters. Jefferson County recognizes the importance of providing its students with the technology education and technology infrastructure necessary to prepare them for the workforce. Many Jefferson County schools provide iPads or other tablets to students, and those that do not encourage students to bring in their own devices to school. Additionally, Jefferson County has based its entire curriculum on the National Education Technology Standards, now ISTE standards, to ensure technology permeates the classroom.

Littleton Public Schools (“LPS”) is similarly dedicated to providing technology in the classroom. Not only does LPS provide Chromebooks for all of their students, but some LPS schools offer a campus portal to access grades and assignments, google apps, and have moved textbooks for several classes online with the idea of moving many more online in the future. LPS values the use of technology in the classroom so highly that it is investing in all of this infrastructure despite significant budget cuts in recent years. Since 2009, LPS’s budget has been cut by about $1,000 per student per year. LPS’s budget situation is dire, but it is still able to provide these resources for its students.

III. PROPOSED ACTION TO IMPROVE TECHNOLOGY EDUCATION AND INFRASTRUCTURE IN COLORADO’S JUVENILE CORRECTIONS SCHOOLS

To maximize the opportunities that technology offers, DYS must install a robust technology-based education system that provides DYS students the same opportunities as their non-incarcerated peers. To do this, three things need to happen: (1) the mandated minimum content standards for school curriculum in

104. Technology in the Classroom, supra note 2.
105. Id.
106. Id.
107. Technology in the Classroom, supra note 2.
109. Technology in the Classroom, supra note 2.
111. Id.
113. Id.
DYS schools need to be raised, (2) funds need to be allocated to meet those standards, and (3) the DYS education system needs to form more substantial relationships with Colorado Universities and other institutions of higher learning.

A. Raising the Mandated Minimum Content Standards for the State of Colorado

There are two ways to raise the minimum content standards for corrections facilities schools in Colorado: update the standards within the parameters of the current law or update the current law to provide for higher standards.

1. Colorado Law Currently

As mentioned above, Colorado law sets low standards for the required courses and content needed for students to graduate.\(^\text{114}\) These baseline content standards are currently determined by the State Board with guidance from Section 22-2-106 of the Colorado Revised Statutes outlining State Board duties and rules.\(^\text{115}\) Individual school districts are then given broad authority to determine specific high school graduation requirements within their jurisdiction, so long as they meet the minimum core competency requirements.\(^\text{116}\) These competency requirements, described in Section 22-7-1005 of the Colorado Revised Statutes, in fact mention courses and standards related to computer science and code writing to become part of competency standards as of July 1, 2018.\(^\text{117}\) However, the statute stops short of explicitly requiring these courses, and instead simply mandates the standards to identify courses that have characteristics that simply relate to them.\(^\text{118}\) This shortcoming makes this provision useless: there is still no actual requirement from the state that schools have to offer technology education. If the Colorado legislature updated these standards to include technology skills, DYS schools would be required to offer technology education.

2. Action Available to DYS

The DYS Board of Education could decide to include technology skills in its graduation requirements and add technology classes to DYS schools. All school districts must start with the Colorado Department of Education’s (CDE) standards as a baseline, but they are free to offer additional classes not mandated by the state

\(^{114}\) See, e.g., C.R.S.A. § 22-2-106 (2017).
\(^{115}\) Id.
\(^{117}\) COLO. REV. STAT. ANN. § 22-7-1005(2.5) (West 2017).
\(^{118}\) Id.
standards and add their own expectations when drafting graduation requirements. Districts determine the graduation requirements based on what competencies and skills are necessary for individuals in the community and are required to seek input from the community when establishing their requirements. It could be argued that reducing recidivism is necessary for this population, and thus any competencies and skills shown to help reach this goal are a necessary part of the curriculum. If technology standards were added to the graduation requirements it would encourage the legislature to provide the funding necessary to ensure incarcerated youth are able to graduate.

Even without calling on the need to reduce recidivism, it can be argued that technology-based competencies are necessary for any youth to be successful into adulthood. Many Colorado school districts have found technology to be so instrumental that they infuse technology and technology education into every aspect of their educational services. In the Jefferson County Public School District, students are required to take technology courses in order to graduate. Further, Jefferson County seeks to give their students meaningful experiences working with technology by providing every student with a laptop or tablet.

The St. Vrain Valley School District (SVVSD) has chosen to make technology a priority as well through its curriculum and technology infrastructure. SVVSD has developed curricular resources aligning technology competencies with its curriculum. Additionally, SVVSD provides iPads, Chromebooks and desktop computers as a necessary component of its curricular plan.

These school districts as well as others have determined that technology skills are necessary for their youth to be successful past high school and have adapted their curriculum and graduation requirements accordingly. The Board of Education for DYS could

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120. Id.
122. GRADUATION REQUIREMENTS, supra note 121.
123. 1:1 Technology in Schools, supra note 108.
similarly determine that technology education is essential to the success of its student population based on the arguments laid down in this Note and adjust accordingly. However, these two school districts had something unavailable to DYS that made technology education implementation possible: funding through mill levies.

3. What would this program look like?

A technology program in DYS could be modeled after the programs already in place in Colorado schools with a few differences given the unique circumstances in corrections facilities. Specifically, correctional schools may have a greater need for restrictive firewalls given the unique privacy and security concerns and the hardware would need to be cared for responsibly.

Any successful school technology program requires infrastructure, software, and access to the internet. Toward that end, DYS, like the aforementioned school districts, should begin by providing computers, chromebooks or tablets to all of their students. Any product that can connect to the internet and run education software would work.

Next, DYS would need to provide education software. One option for Math and Reading would be the i-Ready program.127 The Colorado Department of Education has endorsed this program and already provides subscriptions for the program for the Colorado Facilities Schools District.128 The i-Ready program provides diagnostics, instruction, and interventions aligned with the Common Core Standards.129 This program provides personalized instruction that adapts to the user’s needs and areas for growth.130 Odysseyware provides more options for courses and levels and is currently used in Public Schools across the country.131 Khan Academy provides free materials that can be used to supplement a more robust curriculum.132

129. See I-READY, supra note 127.
4. How much is it likely to cost?

The cost to develop and maintain such a program is a barrier, but not an insurmountable one. A google shopping search for Chromebooks pulls up several options under $200 per unit.\(^{133}\) Depending on the software programs selected, these products could be viable options. Through group rates, it is possible that an even lower price could be negotiated. One company this writer contacted was able to offer units for $139; $100 less than similar models purchased individually.\(^{134}\)

The final consideration would be costs related to internet subscriptions. Representatives from internet providers are hesitant to offer specific estimates for publication. However, according to the Comcast Business website, the largest standard package offered would cost $499.95 per month.\(^{135}\)

Unfortunately, all of these costs are not one-time purchases. Even the infrastructure will need to be kept up to date to achieve the desired results.

B. Funding Technology Education Programs and Resources

1. TABOR

The Taxpayer’s Bill of Rights in Colorado (TABOR) dictates that the governments in Colorado cannot increase total tax revenue beyond the rate of inflation or based on property value increases within its jurisdiction, or in proportion to enrollment numbers for a school district.\(^{136}\) If the state tax revenue exceeds the calculated amount in a given year, the state is required to refund the excess money unless the government gains voter approval to retain and use the funds.\(^{137}\) As with other state governments, the legislature then determines which government services the year’s tax money

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133. Chromebook Google Search, GOOGLE, https://www.google.com/search?tbm=shop&q=laptop&tbps=vw:l, mr:1,cat:328,price:1,ppr_max:350,init_ar:StVQAw4Ag%3D%3D&sa=X&ved=0ahUKEwitqo6Y9jJaAhVJWq0KHTHSA_MQV8s17QMoAA&biw=1280&bih=703 [https://perma.cc/EN7C-L7G].

134. See infra Appendix 1; Chromebook Comparison Google Search, https://www.google.com/search?tbm=shop&q=laptop&tbps=vw:l, mer:1,cat:328,price:1,ppr_max:350,pdr0:1020486677C35,5600001373291016%2439.62400054931466,pdr1:1703960%7C703961,init_ar:SgVKAw4Ag%3D%3D&sa=X&ved=0ahUKEwitqo6Y9jJaAhVJWq0KHTHSA_MQV8s17QMoAA&biw=1280&bih=659 [https://perma.cc/HQ4H-UCXC].


should be directed, and passes a spending bill. However, given the ceiling on tax revenue created by TABOR, legislators have limited power to compensate for ebbs and flows in the financial needs of government agencies and are often required to choose one agency over another. Given the attitudes towards former convicts discussed above, it is not hard to see why legislators would be hesitant to increase funding for corrections institutions.

a. Mill Levy Option

The purpose of TABOR is to limit traditional legislative and gubernatorial powers of setting tax rates and budget policy and instead place these powers more in the hands of voters. Thus, the law allows for taxes to exceed the amount allowed under TABOR through voter approval via a local mill levy. A mill levy is a voter-approved measure that allows a government to collect additional property taxes for a particular purpose. Both Jefferson County and SVVSD were able to implement their technology-centric programs because they knew they could support them with additional funds they would be receiving through mill levies. While this is an option, mill levies are often difficult to get approved. Since its inception in 1992, public services in Colorado have declined in many categories. For example, Colorado fell from 35th to 49th in the nation in education funding as a percentage of personal income between 1992 and 2001.

While the mill levy option under TABOR has worked for some school districts, Colorado corrections schools are on a materially different footing. Undoubtedly, a voter will be more inclined to vote to provide funding for a local school district where it will have a direct impact on their community and people they know, than a

140. See supra Part I.
146. Id.
state-wide corrections school. Public perceptions and even the law, particularly in terms of voting rights, demonstrate a dehumanization and lack of sympathy towards criminal offenders.\textsuperscript{147} Taken together, it is doubtful that the majority of Coloradans would support a tax increase to provide these resources.

b. Fund appropriation through TABOR

Current law grants the legislature authority to determine where tax dollars are directed each year.\textsuperscript{148} However, as mentioned above, more tax dollars for corrections means less for other services including transportation and public education. With the tide of public opinion moving toward rehabilitation of offenders, convincing a legislature that they can help these individuals \textit{and} get reelected is much easier than it would have been a decade ago, but it is unclear whether it is a winning political platform.

c. Eliminate TABOR

The most extreme option for gaining funding would be to eliminate TABOR. Without the restrictions from TABOR, the legislature could look at the funding decision based on research. The legislature could determine that more funding is needed for corrections schools and it is worth a tax increase. While legislators would be more likely than the entire state population to study the relevant research and vote accordingly, it cannot be guaranteed they will do so. Additionally, even with the research in front of them, individuals may decide that their constituencies would prefer a representative who follows the retributivist ethic, and not want to risk reelection by supporting rehabilitation.

2. Fees

One way to raise funds without violating TABOR is to forgo taxes and seek fees.\textsuperscript{149} Fees, however, have their own barriers. Governments cannot impose fees for general expenses; fees must be used for a specific purpose, and those expected to pay the fees must be shown to be the beneficiaries of the stated purpose.\textsuperscript{150} In \textit{Bloom v. City of Fort Collins}, the Plaintiff contested a fee for street maintenance that was imposed upon properties adjacent to the street.\textsuperscript{151} The court held that because there was a rational

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\item \textsuperscript{147} See Lauren Latterell Powell, \textit{Concealed Motives: Rethinking Fourteenth Amendment and Voting Rights Challenges to Felon Disenfranchisement}, 22 MICHIGAN J. OF RACE \\& LAW 383, 384 (2017).
\item \textsuperscript{148} \textsc{Colo. Rev. Stat.} § 2-3-203 (2018).
\item \textsuperscript{150} See Bloom v. Fort Collins, 784 P.2d 304, 308, 310 (Colo. 1989).
\item \textsuperscript{151} \textit{Id.} at 305–06.
\end{enumerate}
relationship between the street maintenance for which the fee would be used and a benefit that would be gained by street-adjacent property owners, the fee was legitimate.\textsuperscript{152} School districts in Colorado use this vehicle for many purposes, including to offer courses and resources not covered in the general curriculum.\textsuperscript{153} The fees are passed to the student’s guardian as a rational relationship exists between the product the fee supports and the child that will benefit from it.

Following the practices of public schools, correction schools could pass fees for these programs on to a student’s parents. This action would be supported through Colorado law, which gives DYS the authority to charge parents fees for children placed within DYS based on the parent’s ability to pay.\textsuperscript{154} However, this solution is limited for many reasons. First, this solution focuses on individuals, not the system as a whole. That means a new request for funds would need to occur at least as often as there is a new student. Second, the amount that DYS can request is based on the parent’s ability to pay. This limitation places the issue of an individual’s education on their parent’s wealth, not the individual’s need. Thus, a student might only receive the recommended education if their parents are able to pay for it. This is similar to what public schools can offer, but parents of incarcerated youth often have added financial burdens just by the nature of their situation. If the parents were able to pay for an attorney to represent their child, they have just spent a great deal of money in the course of trying the case. If the parents were unable to afford a lawyer and the court found them to be indigent, they would not have paid for their lawyer.\textsuperscript{155} However, if the parents were found to be indigent, they would likely be unable to afford these fees regardless.

The Colorado legislature could find other grounds for charging fees from the broader population.\textsuperscript{156} However, finding a vehicle for charging a fee directed at juvenile corrections technology education with a sufficiently rational relationship would require a bit of creativity. This writer has not found such a method. If an appropriate fee were discovered, the fee would need to be put into law, a process that requires time and a receptive legislature.

\begin{thebibliography}{99}
\bibitem{152} Id. at 310–11.
\bibitem{154} 2 \textsc{Colo. Code Regs.} § 504-1-17.100 (2012).
\end{thebibliography}
3. What About the Marijuana Money?

Legal recreational use of marijuana for adults in Colorado has created substantial income for the state, in the tens of millions annually.\textsuperscript{157} The first 40 million each year is allocated to an education construction fund, BEST, and the rest is allocated to support other public services and programs.\textsuperscript{158} The revenue brought in through marijuana sales is substantial, but still has not proven enough to solve all of Colorado’s funding problems. The marijuana cash fund for 2016-2017 totaled 87,216,168, but the Colorado state budget for 2017-2018 will total $28.84 billion.\textsuperscript{159} If the marijuana cash fund reaches the same amount for the 2017-2018 fiscal year, it will only account for about .3% of the budget.

4. Help from the Private Sector

Another option is to forgo funding from the government altogether. This could be done through renegotiating current contracts or through developing new partnerships. With the financial support of an organization or an individual, DYS could afford a technology program without having to engage in the politics of Denver. However, unless DYS were fortunate enough to find a truly dedicated and wealthy benefactor or group of benefactors, DYS would need to constantly be searching for new supporters to keep the program up-to-date.

DYS could also look to renegotiate its current contracts to mitigate some costs. For example, DYS likely contracts with an outside company for phone lines available to inmates. These are large, lucrative contracts where DYS may be able to negotiate. Adding internet service to such a contract may be possible, at least for a discount.


\textsuperscript{158} COLO. CONST. art. XVIII, § 16; BEST Grant Program, COLO. DEPT OF EDUC., https://www.cde.state.co.us/cdefinance/capconstbest [https://perma.cc/2Q86-54L7].

CONCLUSION

This Note argues that technology education is vital to preparing children to be successful in the modern workplace. It argues that children in the juvenile justice system need the support and advantages that technology education could provide to reduce their chances of recidivating. It describes actions that could help the Colorado juvenile corrections system to provide this education. Finally, I ask you, as the reader, to advocate for this cause.

As declared by Colorado law,

The ultimate goal of public education, whatever the student’s post-high school aspirations may be or whatever they may become over time, is to ensure that, to the extent possible, each student is prepared to meet his or her full potential.160

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160. COLO. REV. STAT. ANN. § 22-7-1002(3)(f) (West 2008).