



Australian Government

Australian Institute of Criminology

Trends & issues in crime and criminal justice

ISSN 0817-8542

No. 560 October 2018

Abstract | Developments in information and communications technology (ICT) have changed how people in nations like Australia conduct their lives. Widespread access to the internet, use of social media and the capacity to manage vast amounts of information and to communicate instantly with people all across the world have fundamentally changed our personal and professional lives.

While the use of ICT has increased exponentially for most Australians, those held in our prisons have not had the same access to this technology.

The emerging use of ICT in prisons promises to transform the daily lived experience of prisoners.

This paper explores some of the ways ICT is being implemented in Australian prisons and internationally, and considers the challenges, risks and benefits of bridging the 'digital divide'.

Prisoner use of information and communications technology

Aysha Kerr, Matthew Willis

Over recent decades, technological innovation has significantly influenced society and the way it operates. Information and communications technology (ICT) now plays a fundamental role in the way individuals and organisations communicate, interact, deliver services and undertake basic tasks such as making purchases and managing finances (Smith 2012). The world is becoming more connected, informed and globalised. While correctional institutions have embraced the use of ICT for security, there has been a slower adoption of ICT for use by prisoners. As stated by Johnson (2005, as cited in Jewkes and Johnston 2009: 132):

...the restricted access [prisoners] have to [ICT] is a form of censure that renders them second-class citizens in the Information Age.

However, this situation is rapidly changing and technological innovation is now one of the key issues facing correctional managers. There is a growing recognition that appropriate use of available and emerging ICT has the potential to positively alter the delivery of institutional corrections, not least by improving prisoners' use of time and achieving rehabilitation and wellbeing outcomes. This paper aims to bring together available literature to increase understanding of recent innovations in the use of ICT by prisoners in Australia and overseas, including the benefits and risks associated with the deployment of technology from the perspectives of prisoners and correctional personnel.

Context

It could be argued the term 'ICT' has no one definition and instead encompasses a wide range of products and services such as hardware, software and telecommunications (Stone & Scharf 2011). This paper will adopt a similarly broad definition, while focusing on the use of ICT in shaping prisoners' daily experiences of prison, in their communications with others outside the prison, and in providing education and rehabilitation programs.

Much of the available literature on ICT in prisons focuses on how technology can be used to support correctional staff and prisoners as well as the challenges of operating prisons in a digital society. A common notion explored in the research is that prisoners have become caught in the 'digital divide' and excluded from society. Essentially, the 'digital divide' refers to the inequality some countries, groups and individuals face as a result of barriers to accessing and using ICT (Barreiro-Gen & Novo-Corti 2015). Champion and Edgar (2013) argue the digital divide between prisoners and the wider community is growing rapidly and impacting negatively on prisoners' ability to successfully reintegrate back into society. Other researchers (Barreiro-Gen & Novo-Corti 2015; Hopkins 2015; Pike & Adams 2012) note that digitally excluding prisoners in a technology dependent society can exacerbate their social exclusion on release from prison.

Staying connected

Over the past 20 years, the way we communicate has changed significantly. Technologies such as mobile phones, email and the internet play a fundamental role in the way we communicate, access information and conduct many aspects of our daily lives. ICTs have also been found to reduce recidivism by improving prisoners' use of time and family connections (Evans-Chase 2015; Evon & Olive 2012; Jeans 2017; Knight 2015; Reisdorf & Jewkes 2016).

Computers and the internet

Several researchers have looked at the use of computers (Champion & Edgar 2013; Justice Action 2011) and the internet (Harrison 2014; Reisdorf & Jewkes 2016; Smith 2012) in prisons. In most Australian and international correctional facilities, prisoners are permitted to access computers for work, education, legal or training purposes (Justice Action 2011). While this access is predominantly restricted to educational centres or designated rooms, some correctional facilities allow prisoners to access computers in their cells. In Australia, correctional facilities in Victoria, the Australian Capital Territory and Queensland allow eligible prisoners to use secure computers in their cells for study, legal or reintegration purposes, although not all eligible prisoners will have access and availability varies within and between facilities (ACT Corrective Services 2010a; Corrections Victoria 2016; Farley et al. 2015; Justice Action 2011).

The available literature suggests that Canberra's Alexander Maconochie Centre is the only correctional facility in Australia that allows prisoners to access the internet (ACT Corrective Services 2010b; Farley et al. 2015). However, this access is limited to specific websites that will enhance a prisoner's education or reintegration into society. The process of assessing websites to decide which ones can be accessed is resource intensive and the range of approved sites may be small. According to Harrison (2014), internet use in other Australian prisons remains unclear as the policies and procedures of many correctional facilities are not publicly available. The *Standard guidelines for corrections in Australia* (2012: 29) state that, while prisoners should be provided access to computers for legitimate study purposes, internet access should be 'strictly controlled'.

The international environment is similar to Australia's, in that internet use by prisoners is still in its infancy. Based on the available literature, internet access is prohibited or heavily restricted for prisoners in Canada (Correctional Service Canada 2016), Spain (Barrero-Gen & Novo-Corti 2015), the United Kingdom (Champion & Edgar 2013; Jewkes & Johnston 2009; Reisdorf & Jewkes 2016), most states in the United States (Gorgol & Sponsler 2011) and closed prisons in Denmark (Denmark Directorate of the Prison Service 2012, as cited in Smith 2012). There appear to be fewer restrictions for prisoners in Norway, although access is still restricted in closed prisons, with a limited range of websites available in other facilities (Justice Action 2011). In other Norwegian facilities, inmates have more freedom to use the internet for education, but some content is still blocked and browsing history is logged, with privileges being withdrawn for misuse (Jewkes & Johnston 2009; Tickle 2012).

While internet access is prohibited in higher security prisons in Denmark, open prisons permit greater access to the internet from computers located in cells, educational centres and prison 'internet cafes' (Denmark Directorate of the Prison Service 2012, as cited in Smith 2012). Internet use in individual cells and educational centres is less frequent and predominantly for educational purposes, whereas the internet cafes provide greater freedom for prisoners to search the internet. However, this use is monitored by prison staff and social media platforms such as Facebook and websites containing inappropriate content are blocked. In 2010, internet cafes were available in six of the eight open prisons in Denmark and prisoners have access to these facilities a few times a week (Denmark Directorate of the Prison Service, as cited in Smith 2012).

While internet access in European prisons remains largely restricted, this may change in coming years following a 2016 determination of the European Court of Human Rights (ECtHR) that denying a prisoner access to certain information available on the internet may be a violation of the European Convention on Human Rights (Voorhoof 2016). The case before the ECtHR involved an Estonian life sentence prisoner who requested access to online material to help him pursue a number of legal disputes with the prison administration. In its judgement, the court:

...reiterated that the right to receive information basically prohibits a government from preventing a person from receiving information that others wished or were willing to impart. ...as imprisonment inevitably involves a number of restrictions on prisoners' communications with the outside world, including on their ability to receive information, the Court considered that Article 10 of the Convention cannot be interpreted as imposing a general obligation to provide access to the Internet, or to specific Internet sites, for prisoners. Nevertheless, since access to certain sites containing legal information is granted under Estonian law, the restriction of access to other sites that also contain legal information constitutes an interference with the right to receive information. (Voorhoof 2016: 1)

The court determined that the kind of legal information the prisoner wished to access promoted public awareness and respect for human rights and was important for protecting his rights in court proceedings.

Email

Consistent with its approach to internet use, the Alexander Maconochie Centre in the Australian Capital Territory is the only correctional facility in Australia that allows prisoners to use email (ACT Corrective Services 2010b; Farley et al. 2015). At this facility, authorised prisoners can use designated computers to email up to five approved contacts. Based on the available literature, email use seems to be more prominent in correctional facilities overseas. Electronic messaging or email services are available in correctional facilities in Norway, Denmark, the United States and the United Kingdom (Johnson 2016; Knight 2015). In the United States, the Trust Fund Limited Inmate Computer System (TRULINCS) was implemented by the Federal Bureau of Prisons (BOP) in 2006 and is now available in every BOP operated correctional facility (Federal Bureau of Prisons 2016). The system operates as a paid service that enables prisoners to exchange electronic messages with approved contacts. The service operates without commercial investment or taxpayer funding, with funding provided solely from a trust fund maintained by profits from inmate commissary purchases, use of paid telephone services and fees paid for using TRULINCS (Federal Bureau of Prisons 2016: np).

Across many state, county and federal correctional facilities in the United States, inmate email services are provided on a commercial basis, primarily through one major supplier. This service enables prisoners to receive, print or send electronic messages and photo attachments, although access to these functions may differ between correctional facilities and come at a cost to the prisoners and their families, in the form of fees and surcharges (Maass 2015a). As of late 2015, the provider was charging prisoners US\$30c for every email, while families transferring money to relatives in custody were charged US\$5.95 for an average US\$70 transaction (Kosman & Dugan 2015).

A similar service called 'Email a Prisoner' operates in the United Kingdom and now in Australia. This service was first introduced in the United Kingdom at the Guys Marsh Prison in 2006 and is now in place at most prisons across the United Kingdom (Knight 2015). At the time of writing, the service had recently been launched in Australia initially with eight, mostly private, prisons participating across three jurisdictions—Queensland, Victoria and Western Australia (see www.emailprisoner.com.au). Email a Prisoner differs slightly from the services offered in the United States, as prisoners cannot electronically respond to emails (Knight 2015; Email a Prisoner 2016). Instead, prisoners are required to hand-write a reply, which is then scanned, censored and sent by correctional staff. While the reply service is only available at selected UK prisons, it is available at each of the eight participating Australian prisons. The ability to include photograph attachments in the email sent to prisoners is available only at selected facilities in both Australia and UK.

Some researchers have suggested allowing prisoners access to email and online communication can have unintended security benefits for correctional facilities. One advantage suggested by Fabre and Zymaris (2016) is that correctional staff can more easily and efficiently monitor prisoner communication. In particular, using automated key-word searches and other related analytic software enables correctional staff to easily detect breaches in email and online communication without having to spend hours reading physical mail, providing a cost saving for the facility. Fabre and Zymaris (2016) and others (Knight 2015; NOMS 2008) suggest prisoner use of digital communications can also help to prevent contraband entering correctional facilities. Searching through physical mail for illicit material and items is a resource intensive yet necessary task for correctional personnel. Allowing prisoners to use email and videoconferencing not only makes it easier and perhaps cheaper for them to communicate with loved ones but also reduces the incidence of illicit items being concealed in physical mail.

At the same time, the commercialisation of prisoner communications has raised concerns. Aside from the direct financial costs that are borne by prisoners and their families, the major US supplier's terms of service appeared to grant it intellectual property rights over prisoners' letters, pictures, videos, poems and other creative works (Maass 2015a). These terms of service have since been changed to make clear that the company does not claim these intellectual property rights (Maass 2015b).

However, the conditions of service are still problematic. In one case, a prisoner in Indiana was subjected to disciplinary action including solitary confinement, blocking of his account and loss of privileges after his sister, who was running a campaign about his claimed wrongful conviction, used the service to transmit a video about the campaign (Maass 2015a; Guerra 2015). The sister's email account was blocked and she could not contact her brother. Indiana corrections staff asserted they were enforcing the supplier's terms of service in taking disciplinary action (Guerra 2015; Maass 2015a).

Some have questioned the way the private business model profits at the expense of prisoners and taxpayers. The company has advocated for US corrections agencies to purchase its secure tablet devices in exchange for the provision of free educational services (Kosman & Dugan 2015). As well as the educational services, the supplier uses the tablets to sell digital media including music and ebooks, allowing the company to profit both from the purchase of hardware through public funds and through the use of that hardware to sell services to prisoners (Kosman & Dugan 2015). Human rights advocates have noted the privately operated money transfer business commercialised a previously free service, while the US Federal Communications Commission imposed a cap on communication costs to prevent ‘predatory’ charging by the major supplier and a number of competitors (Kosman & Dugan 2015: 1).

Videoconferencing

Videoconferencing technology has also emerged as an innovative tool for correctional facilities to enhance communication and improve prison processes. In particular, videoconferencing and related programs such as Skype are increasingly being used in prisons to facilitate legal proceedings, family visitation and, in some cases, medical consultations. Using videoconferencing technology for these purposes can reduce correctional costs, as fewer staff are required to transport prisoners off site and supervise physical visitation (Digard et al. 2016; Doyle, Fordy & Haight 2011; NSW DoJ 2015, 2014; Phillips 2012).

Many correctional facilities cover the cost of implementing videoconferencing technology, and in some cases raise revenue, by charging prisoners and their visitors to use these services (Digard et al. 2016; Doyle, Fordy & Haight 2011). Videoconferencing can also help improve prisoner reintegration, as staying connected to family and friends outside of prison can enhance an offender’s self-worth and, in turn, reintegration into society (Justice Action 2011).

In Australian prisons, videoconferencing technology is most prevalent in New South Wales (McKay 2016). The NSW Department of Justice (NSW DoJ) implemented a videoconferencing scheduling system in 2009 which enables NSW Corrective Services and other NSW DoJ agencies to book and access videoconferencing facilities (NSW DoJ 2016b). In 2015–16, over 31,000 legal and other professional interviews were scheduled using this system, up 57 percent from 2014–15 (NSW DoJ 2016a). More than 27,000 legal and professional meetings were scheduled for videoconferencing in the last six months of 2016 alone (NSW DoJ 2017). In 2015–16, NSW Corrective Services coordinated 4,570 videoconferences and nearly two-thirds (63%) of all court matters involving young people in custody were dealt with using audiovisual technology, compared with 52 percent in 2014–15 (NSW DoJ 2016a). Also during 2015–16, 54,456 appearances before the NSW State Parole Authority—100 percent of such appearances for inmates in custody—were conducted through videoconferencing (NSW DoJ 2016a).

Videoconferencing technology is also being used in the Family Video Contact Program (NSW DoJ 2016b, 2015). The program enables prisoners to contact family members and loved ones through videoconferencing. In turn, this helps to overcome the barriers to visiting incarcerated loved ones that Aboriginal and Torres Strait Islander people in particular often face, such as financial hardship, transport constraints and health issues. In 2015–16, 86 family video contact sessions were held in Sydney and six regional locations, supported by community-based agencies (NSW DoJ 2016b).

Videoconferencing technology is in use at six prisons across South Australia to facilitate court appearances (SA Department for Correctional Services 2015). As discussed further in the education section, the University of Southern Queensland (USQ) is using videoconferencing for prisoner education in Queensland and the Northern Territory.

Internationally, correctional facilities in Ireland, the Netherlands (EuroPris 2013), Belgium (Ebo Enterprises 2016), the United Kingdom (Champion & Edgar 2013; Reisdorf & Jewkes 2016) and the United States (Digard et al. 2016; Doyle, Fordy & Haight 2011) use videoconferencing technology to facilitate court appearances, legal proceedings and, in some cases, family visitation and medical consultations. In the United States, videoconferencing technology has been used in correctional facilities since the 1990s for video court links (Knight 2015). Videoconferencing family visits have also been increasing and are now available in 15 US states (Digard et al. 2016). Digard and colleagues stated almost all correctional facilities in Indiana, Ohio, Oregon and Washington allow video visitation, while in the other 11 states access ranges between 20 and 66 percent of correctional facilities. In comparison, Champion and Edgar's (2013) survey found only one prison out of 42 in England and Wales allowed prisoners to use videoconferencing technology to contact family members. In addition, Reisdorf and Jewkes (2016) noted two of the three British prisons in their qualitative scoping exercise were trialling Skype for family visitation. Other countries such as Ireland, the Netherlands and Belgium also allow prisoners to use videoconferencing to contact family members, but the prevalence of this use is less well documented, at least in English.

Education, employment and rehabilitation

Educational programs

Advancements in technology have also provided correctional facilities with new avenues to deliver education programs for prisoners. Educational programs have been found to reduce the likelihood of reoffending and thus improve an offender's chances of reintegrating into society (Davis et al. 2011). For this reason, researchers and correctional facilities are increasingly exploring innovative technologies that can enhance such programs. A large body of the literature focuses on the use of technology in correctional education both domestically and internationally.

USQ has implemented a number of innovative projects using technology to enhance prisoners' access to tertiary education, culminating in the current Making the Connection project. A literary-enhancement project, Virtual Campus, is also assisting the education of prisoners.

Making the Connection

Commencing in 2012, the PLEIADES project (Portable Learning Environments for Incarcerated Adult Distance Education Students) trialled the use of secure digital and mobile learning technologies in the Southern Queensland Correctional Centre (Farley et al. 2014). The project aimed to allow prisoners in Queensland, who are prohibited from accessing the internet, to complete the USQ Tertiary Preparation Program using an internet-free extension to the university's Learning Management System and course materials on ebooks. While having some positive results, PLEIADES was hampered by a lack of support, training and access to hardware and lecturers (Farley, Murphy & Bedford 2014).

Following PLEIADES, the Triple E project (Empowerment, E-Learning and E-Readers) was initiated by Open Access College in 2013. The project expanded on PLEIADES with additional ebooks and extension to five Queensland correctional centres. The project experienced similar and additional challenges to PLEIADES, particularly inadequacies of the provided ebooks (Farley & Doyle 2014).

Making the Connection began in 2013 with \$4.39 million in funding from the Australian government's Higher Education Participation and Partnerships Program to build upon the previous projects (Farley et al. 2015). As of July 2017, it had nearly 30 active sites across four jurisdictions (Queensland, the Northern Territory, Tasmania and Western Australia), and more than 700 prisoner-students doing around 1,500 courses (H Farley personal communication 21 July 2017). Discussions were underway on further expansion into the remaining Australian jurisdictions (University of Southern Queensland 2017). The Making the Connection project focuses on providing improved technology to incarcerated students, expanding on the courses available and further developing user interfaces. The project uses internet-free notebook computers, allowing students to study in their cells (Farley et al. 2015).

Perhaps the most notable aspect of this project is its focus on improving access for Indigenous incarcerated students. Farley et al. (2015) recognise the alarming over-representation of Indigenous people in Australian prisons, with Indigenous people making up approximately two percent of the Australian population but 27 percent of the prison population (ABS 2016b). Noting this, the project team has adapted six 'offline' courses from the Indigenous Higher Education Pathways Program and employed an Engagement Leader and an Aboriginal and Torres Strait Islander Community Engagement Coordinator (Farley et al. 2015). These courses sit alongside tertiary preparation courses, a Diploma of Arts in Community Welfare and Development, a Diploma of Science in Environment and Sustainability, and an Associate Degree of Business and Commerce (H Farley personal communication 21 July 2017).

Virtual Campus

Virtual Campus is a secure ICT learning platform, similar to that used in the Making the Connection project. The platform is in place at the majority of prisons in England and enables prisoners to complete online training modules and access information about employment (Open University 2016). Prisoners can visit secure websites such as those that host job advertisements, although access to the internet is generally limited. Prison staff and educational officers can also use the platform to develop learning action plans, view cohort statistics and securely send and receive messages to and from the offenders. A case study by Turley and Webster (2010) showed the platform has many benefits for the correctional facilities, staff and prisoners. For instance, Virtual Campus has streamlined the provision of education in correctional facilities; improved staff performance, practice and personal fulfilment; and enhanced educational outcomes for prisoners.

While Virtual Campus offers many benefits, Pike and Adams (2012) suggest there is limited additional literature evaluating its effectiveness. A 2011 review of the Virtual Campus network in the West Midlands of England found connectivity and log-in issues impacted on prisoners' experiences and ability to make use of the system (Knight 2015). It has been noted that, as of mid-2016, only six percent of the prison population of England and Wales were regularly using the Virtual Campus education system (Ministry of Justice 2017; Stanford 2016). This is partly due to limitations of the technology and associated infrastructure, but the inability to freely access the internet creates reliance on teachers for resources and is a major barrier to completing course requirements (Jeans 2017; Tickle 2012). Prisoners also face other challenges in trying to take advantage of education systems. These include high rates of cognitive deficits, intellectual disability, distrust of education, and the disruptive effects of security arrangements, prison routines and prisoner movements between facilities (Stanford 2016; Tickle 2012).

Employment

The use of new and innovative technology has also enabled correctional departments to improve and broaden the employment programs available in correctional facilities. Increasing access to the internet, email and computers in prisons can give prisoners the skills and abilities they need to gain employment on release from prison (Knight 2015; Harrison 2014). As highlighted by Knight (2015) and Justice Action (2011), having personalised computers in prison cells and internet access improves the ability of prisoners to search for employment while incarcerated and undertake relevant study. A 2012 analysis of ICT use in the UK found that 22 out of 42 prisons (52%) were using ICT to allow prisoners to submit job applications using secure relay messaging, 17 (33%) were using secure relay messaging for contacting employment or other agencies, 16 (31%) were using ICT in prison workshops and 11 (21%) for virtual interview practice (Champion & Edgar 2013). The Virtual Campus education system used in the UK offers some employment-related functionality, but this appears to have been underdeveloped relative to its education functionality (Champion & Edgar 2013).

iTalk Studios is a Northern Territory-based media production and training company that produces education, training, marketing and other resources for primarily Aboriginal audiences (iTalk Studios 2016). In 2014, iTalk began an industry training program through which prisoners at the Alice Springs Correctional Centre complete formal training in media production and develop skills and experience that will help them gain employment on release through the Northern Territory Department of the Attorney-General and Justice's employment program.

Rehabilitation

Researchers have begun investigating the potential for ICT to be used in delivering rehabilitation programs, such as cognitive skills training. Research conducted through Melbourne's Swinburne University of Technology, in partnership with private prison operators and game developers, is investigating the use of games and similar technology to develop cognitive skills that will aid the reintegration of released prisoners (Pfeifer & Conway 2015). Drawing on a broad forensic psychology evidence base, the Level-Up program is delivered over 14 three-hour sessions, with 12 specific modules relating to core cognitive skills of problem recognition and acceptance, openness to intervention, locus of control, basic decision-making capability, emotional intelligence and regulation, and motivation and resilience (ibid). The use of gaming technology is claimed to develop these skills, as well as literacy, numeracy and life skills, in a way that engages a broad range of prisoners and in a cost-effective manner (ibid). While this is one specific example, it suggests the potential for ICT to play a major role in offender rehabilitation in the future.

Day-to-day activities

Kiosks and tablets

A prisoner 'kiosk' is essentially a touch screen device that enables prisoners to undertake various tasks. Kiosks can be used for similar purposes as tablets but are immobile so are used only in common areas. These devices have recently emerged as an innovative way for correctional facilities to improve processes and give prisoners autonomy to 'get their life back' (Knight 2015). ICTs are regularly used by the wider society to manage everyday aspects of life such as employment, education, leisure, healthcare, relationships and finances. Therefore, normalising the use of such technologies to manage these tasks can enhance an offender's reintegration into society (Champion & Edgar 2013; Evans-Chase 2015; Harrison 2014; Knight 2015). Depending on the correctional facility, prisoners may use a kiosk or tablet to:

- manage and transfer prison earnings and gratuities in prison accounts;
- schedule appointments such as visits, programs, education and employment;
- access information about their sentence;
- search for employment and apply for jobs;
- make prison canteen purchases and requests;
- receive notices and messages; and
- engage in other educational or leisure activities (Ebo Enterprises 2016; Knight 2015; NT Department of Correctional Services 2015; Rarick & Kahan 2009).

The suitability of ICT hardware for use in a prison environment is an important consideration, particularly for devices that are to be used in cells. As indicated above, privately supplied email, education and digital entertainment content are delivered through tablets designed for use by prisoners and marketed to families and corrections administrators. The model of tablets currently in use were released at the relatively low price point of US\$70 (Matney 2015), indicating the company's business model relies mainly on the ongoing charges for email, money transfer and digital content, as well as purchases through the company's own app store (Ligato 2015). Available in different screen size and installed memory combinations, the tablets have robust, transparent moulded plastic cases to prevent them being damaged or used to conceal contraband, and a secure boot loader that stops prisoners making changes to the operating system (Matney 2015). They have built-in wi-fi for use in institutions that have this capability and can be synchronised with kiosks located in common areas. Email messages written on a tablet are not sent until the tablet is synchronised with a kiosk, at which point they are submitted to prison administrators for review and forwarded on if approved (Ligato 2015). Administrators are able to use automatic filters to make the review process more efficient and adaptable to the assessed risk level of individual prisoners (Ligato 2015).

In 2014–15 the Northern Territory Department of Correctional Services (NTDCS) implemented a prisoner purchasing system, which includes kiosks that use iris scanning technology to identify the prisoner (NTDCS 2015). Prisoner kiosks have since been implemented in New South Wales and Western Australia. One international equivalent is the PrisonCloud, a secure IT platform used at Beveren Prison in Belgium (Ebo Enterprises 2016). PrisonCloud enables prisoners to access services relating to all aspects of life such as employment, education, leisure, healthcare, finances and legal matters. It aims to improve offender reintegration into society by normalising the use of technology and responsibility for such matters (Ebo Enterprises 2016) through a 'seamless' linking of classroom-style and in-cell learning (Knight 2015: 7). However, PrisonCloud has received some criticism from the media and public, as prisoners can download content including adult films (Tighe 2016). In response, the deputy director of the prison, Wim Adriaenssen, stated:

People will be shocked but watching porn in prison, especially for young people who are incarcerated, it's a kind of an ersatz for something else. It's also in our interest to keep them in humane conditions and that means providing for certain things. (Tighe 2016: np)

According to Knight (2015), other countries such as Norway, Sweden and the Netherlands are also looking to implement the PrisonCloud model.

Challenges and risks

This section presents some of the challenges and risks the literature suggests may arise when implementing ICT in correctional settings.

Safety and security

According to the literature, the main challenge faced by correctional departments when implementing new technologies is security. As highlighted by Knight (2015), allowing prisoners to access more advanced and interactive technology essentially enables them to 'reach the outside world'. In turn, there is an increased risk that prisoners will exploit access to ICT to engage in criminal activity or obtain prohibited material such as pornography (Champion & Edgar 2013; Tolbert & Hudson 2015). This is the primary reason why correctional departments have prohibited or significantly restricted the use of many ICTs including the internet, email and personal computers (Reisdorf & Jewkes 2015; Harrison 2014; Smith 2012). Fabre and Zymaris (2016) provide examples of ways prisoners can also misuse computers to make improvised weapons, conceal physical and digital contraband, engage in clandestine communication and compromise systems. However, some researchers have suggested that limiting prisoners' access to technology because of security concerns potentially presents a greater risk to public safety (Champion & Edgar 2013; Jewkes 2008, as cited in Reisdorf & Jewkes 2016; Jewkes & Johnston 2009; Tolbert & Hudson 2015). For instance, Jewkes (2008, as cited in Reisdorf & Jewkes 2016: 6) stated:

...for as long as prisoners' access to the internet is framed as a security issue, the repercussions are likely to involve greater insecurity for the community at large, as prisoners are released back into the community with significant deficits.

For this reason, a number of writers (Champion & Edgar 2013; Fabre & Zymaris 2016; Harrison 2014; Justice Action 2011) have argued putting in place mechanisms to manage these security risks is far more beneficial than prohibiting access altogether. According to the literature, there are many controls correctional departments can implement to manage prisoner use of email, the internet, computers and related technologies. In particular, correctional departments can restrict access to certain content, monitor use, limit the functionality of the technology, and implement strict conditions on use (Champion & Edgar 2013; Farley & Doyle 2014; Harrison 2014; Justice Action 2011; Koudstaal et al. 2009). According to Justice Action (2011), providing prisoners with privileged access to ICTs can help reduce prisoner disruption and misbehaviour because of fear that their access will be rescinded.

Initial cost and ongoing funding

Another significant challenge faced by correctional departments is the cost associated with installing and maintaining new technology. As previously highlighted, the use of technology in prisons can potentially improve processes and save correctional departments money in the long term. However, initial installation costs and limited funding can be significant barriers (Digard et al. 2016; Knight 2015). This is particularly so given the impacts of increasing prison populations (ABS 2017), which can put a strain on education and other prisoner services at the expense of security requirements.

Stone and Scharf (2011) suggest correctional departments are often reluctant to invest in new technology because of the uncertainty around whether they will actually save aggregate costs in the long term. Securing funding to purchase, maintain and upgrade technology can be difficult for correctional departments, particularly in an environment where newer and more efficient technologies are continuously being released on the market (Tolbert & Hudson 2015; Stone & Scharf 2011). As noted by Tolbert and Hudson (2015), adopting new technology also requires additional resources for policy development and staff training. Together, these issues make it difficult for correctional departments to implement and use the most up-to-date and efficient technologies. In many cases, by the time correctional departments purchase, install, adapt and fully implement new technologies, newer models or upgrades are available (Tolbert & Hudson 2015). This can be frustrating for correctional staff and prisoners who are using older or less efficient technology, as highlighted in the example of the inadequate ebooks deployed in the Triple E project (Farley & Doyle 2014).

Cost and funding challenges are somewhat addressed through business models that provide hardware and installed software at a low cost. This model also tends to shift the risk of hardware redundancy to the service provider rather than correctional administrators. However, it can also shift the initial and ongoing costs away from government and private correctional administrators to prisoners and their families. There is a potential for marginalisation and conflict where individuals or families are unable or unwilling to meet these costs. Some service provider charges, such as fees for previously free money transfers, create an impost on disadvantaged families, to the benefit of private corporations. As Australian corrections agencies move towards increasing ICT access in prisons and potentially youth detention facilities, the risks and benefits of engaging with private providers and the models seen in the US will need careful consideration.

Public perception

The public discourse around punishment often favours a 'tough on crime' approach (Hopkins 2015). As a result, correctional departments that use innovative technology to improve prisoner rehabilitation outcomes and reduce boredom are often viewed by the public as providing an environment that is too lenient or as favouring prisoners (Hopkins 2015; Justice Action 2011; Knight 2015). For instance, media coverage has highlighted prisoners' licit or illicit use of technology with headlines including '19-year-old convicted killer shows off his PlayStation, TV and hoard of snacks' (Daily Mail 2012, as cited in Knight 2015) and 'Violent thug who kicked teenage schoolboy to death boasts about "easy life" behind prison bars on Facebook' (Silvester & Jones 2016). Esposito (2000) suggested victims and their families have expressed a sense of injustice that prisoners who have committed serious offences are allowed what they consider to be privileges such as internet access.

Custodial staff may share the same perceptions about prisoners accessing technology. Reisdorf and Jewkes (2016) suggest this can present challenges when implementing new technologies. Their qualitative study found implementation of Skype in two British prisons was significantly hindered by staff who did not allow prisoners to fully and comfortably access the services. In addition, implementing such technologies to reduce labour costs is often looked at unfavourably by custodial personnel and the public, particularly at times of high unemployment in the general community (Stone & Scharf 2011). This can make it difficult for correctional facilities to secure political approval and funding to deploy innovative technologies, especially when return on investment is not guaranteed and the technology is viewed by the public as unnecessary (ibid).

Looking to the future

As suggested by the literature, deploying new technology in prisons can deliver many benefits for correctional departments, their staff and prisoners. However, it is clear implementing such technologies also comes with challenges and risks. For this reason, some researchers have considered the priorities for future development and investment to ensure technology is efficiently used in prisons. Many suggest it is no longer acceptable for prisoners to be both physically and digitally excluded from society (Champion & Edgar 2013; Harrison 2014; Pike & Adams 2012), with some even arguing this represents a form of segregation and silencing (Jewkes & Johnston 2009: 142).

It is widely accepted in the literature that giving prisoners greater access to technology for rehabilitation and reintegration purposes is a key priority moving forward. However, correctional departments, policymakers and governments must first gain a clearer understanding of how different technologies can be effectively deployed and managed. As noted by Smith (2012), there is little empirical data highlighting what best practice actually looks like when implementing technologies such as the internet in prisons. Therefore, evaluation research would help inform policy decisions about the extent to which prisoners should be given access to different technologies and best practice for implementation. Stone and Scharf (2011) suggest increased funding and support from state and federal governments is needed to conduct such research and, thereafter, implement technologies shown to be effective. According to Stone and Scharf (2011) and others (Hopkins 2015), increasing public education is integral for gaining political commitment in an environment where the use of innovative technology by prisoners is often looked upon negatively by custodial staff, media and the public. Educating the public about the cost savings and positive security, rehabilitation and recidivism outcomes that the deployment of new technology can bring may minimise these negative perceptions. However, Hopkins (2015: 53) argues:

It is also important that the academic conversation around reducing recidivism is not hijacked by an economic focus on 'human capital'.

Ultimately, evaluation research will assist correctional departments to determine which technologies will provide the greatest return on investment and to ensure they are prioritised for future investment and development.

Despite this lack of empirical research, scholars have argued that the digital divide between prisoners and the community will only widen if correctional departments do not invest in technologies that improve prisoner access to education and enhance communication with those outside of prison (Champion & Edgar 2013; Harrison 2014). As highlighted above, computers, the internet, email, videoconferencing and so on have become an integral part of everyday life, and providing prisoners with a degree of autonomy in using such technologies to undertake basic tasks better equips them for life after release. However, there are limits to the applicability of custodial use of ICT to the period post-release, given the extent to which prisoners' access to the internet and the full range of ICT functionality is necessarily restricted, and given that hardware and software modified for prison use may differ from those used in other settings.

Developing a coordinated ICT strategy is an effective way for correctional departments to address the security concerns associated with providing prisoners access to such technologies (Champion and Edgar 2013). Detailing a consolidated plan for implementation, evaluation and management of technology in correctional settings can give correctional departments greater assurance that the maximum benefits of investing in new technology will be attained. According to Hopkins and Farley (2015), effective use of technology in prison environments transcends simply implementing the newest technology. Instead, it requires correctional departments to invest in creating and sustaining a culture that values the use of technology to enhance prisoner rehabilitation and wellbeing outcomes, and providing the time, space, resources and commitment to do so. Drawing on this notion, Hopkins and Farley (2014) suggest it is not even the technology itself that matters but instead the inclusion that is afforded by such technology. They suggest that technology is merely a tool to improve prisoner relationships, post-release employment opportunities and access to education—in essence, to connect them to the world outside of prison.

In the rapidly evolving and emerging space of prisoner use of ICT, the role of private organisations—both prison administrators and technology providers—will likely be critical to innovation and development. The contract for operating Acacia Prison in Western Australia provides for an annual bonus if the contractor can demonstrate innovation that reduces the cost or improves the quality of services, such as through the implementation of new technology (Andrew, Baker & Roberts 2016). If the state does pay the innovation bonus, it is entitled to acquire intellectual property rights for the innovation and deploy it in other state facilities. Western Australia's first kiosk system, the Custodial Management System, was first implemented by the Acacia Prison provider in 2011, although it had been in use in the UK for some time (Andrew, Baker & Roberts 2016).

It remains to be seen whether Australia will adopt the approach seen in the US of commercialising prisoner communications, education and digital entertainment. However, it is likely that much of the ICT innovation to come will be stimulated by the potential for commercial gains from hardware, software and service provision. Determining what this will mean for the daily lived experiences of people in custody is an emerging challenge for correctional practitioners and policymakers.

References

- ACT Corrective Services 2010a. *Alexander Maconochie Centre: Information booklet*. <https://www.parliament.nz/resource/0000177634>
- ACT Corrective Services 2010b. *Corrections Management (Email, Internet and Legal Education and Resource Network [LEARN] for Prisoners) policy 2010*. <http://www.legislation.act.gov.au/ni/2010-63/default.asp>
- Andrew J, Baker M and Roberts P 2016. *Prison privatisation in Australia: The state of the nation*. Sydney: University of Sydney. <http://sydney.edu.au/business/research/projects/prison-privatisation>
- Australian Bureau of Statistics (ABS) 2017. *Corrective services, Australia, September quarter 2017*. ABS cat. no. 4512.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4512.0>
- Australian Bureau of Statistics 2016a. *Household use of information technology, Australia, 2014–15*. ABS cat. no. 8146.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs40.nsf/mf/8146.0>
- Australian Bureau of Statistics 2016b. *Prisoners in Australia, 2016*. ABS cat. no. 4517.0. Canberra: ABS. <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4517.0>
- Australian Communications and Media Authority (ACMA) 2010. *Review of the mobile phone jammer prohibition: Public discussion paper*. Melbourne: ACMA
- Australian Law Reform Commission (ALRC) 2008. *For your information: Australian privacy law and practice*. ALRC Report 108. Sydney: ALRC
- Barreiro-Gen M & Novo-Corti I 2015. Collaborative learning in environments with restricted access to the internet: Policies to bridge the divide and exclusion in prisons through the development of the skills of inmates. *Computers in Human Behaviour* 51: 1172–1176
- Champion N & Edgar K 2013. *Through the gateway: How computers can transform rehabilitation*. London: Prison Reform Trust
- Correctional Service Canada 2016. *Frequently asked questions: National correctional programs*. <http://www.csc-scc.gc.ca/correctional-process/002001-2022-eng.shtml#f35>
- Corrections Victoria 2016. *Work, education and training*. <http://www.corrections.vic.gov.au/home/prison/going+to+prison/work+education+and+training/>
- Davis LM, Bozick R, Steele JL, Saunders J & Miles JNV 2011. *Evaluating the effectiveness of correctional education: A meta-analysis of programs that provide education to incarcerated adults*. Santa Monica: RAND Corporation
- Digard L, diZerega M, Yaroni A & Rinaldi J 2016. *A new role for technology? Implementing video visitation in prison*. New York: Vera Institute of Justice
- Doyle P, Fordy C & Haight A 2011. *Prison video conferencing*. Vermont: Vermont Legislative Research Service, University of Vermont
- Ebo Enterprises 2016. *PrisonCloud*. <http://www.ebo-enterprises.com/prisoncloud>
- Email a Prisoner 2016. *Frequently asked questions*. <https://www.emailprisoner.com/faq.cfm>
- Esposito JL 2000. Virtual freedom—Physical confinement: An analysis of prisoner use of the internet. *New England Journal on Criminal & Civil Confinement* 26(1): 39–66
- EuroPris 2013. *ICT Expert Group meeting, 12–13 December 2013: Summary report*. Netherlands: EuroPris
- Evans-Chase M 2015. If they like it they can take it with them: A mixed methods examination of internet-based mindfulness meditation with incarcerated youth. *Advances in Social Work* 16(1): 90–106
- Evon J & Olive F 2012. The utilization of MP3 players in correctional segregation units. *Corrections Today* 74(6): 53–56

- Fabre R & Zymaris C 2016. *Designing secure prisoner computer systems*. Lulu.com
- Farley H et al. 2015. Making the connection: Allowing access to digital higher education in a correctional environment. *Proceedings of the 2015 Australasian Society for Computers in Learning in Tertiary Education Conference (ASCILITE)*. Perth: ASCILITE: 434–439
- Farley H & Doyle J 2014. Using digital technologies to implement distance education for incarcerated students: A case study from an Australian regional university. *Open Praxis* 6(4): 357–363
- Farley H, Murphy A & Bedford T 2014. Providing simulated online and mobile learning experiences in a prison education setting: Lessons learned from the PLEIADES pilot project. *International Journal of Mobile and Blended Learning* 6(1): 17–32
- Federal Bureau of Prisons 2016. *TRULINCS topics: funding*. <https://www.bop.gov/inmates/trulincs.jsp>
- Gorgol LE & Sponsler BA 2011. *Unlocking potential: Results of a national survey of postsecondary education in State prisons*. Issue brief. Washington, DC: Institute for Higher Education Policy
- Guerra K 2015. DOC punishing woman for posting video of imprisoned brother on Facebook, suit says. *IndyStar*, 5 Feb. <https://www.indystar.com/story/news/2015/02/05/doc-punishing-woman-posting-video-imprisoned-brother-facebook-suit-says/22946347/>
- Harrison L 2014. Prisoners and their access to the internet in the pursuit of education. *Alternative Law Journal* 39(3): 159–162
- Hopkins S 2015. Ghosts in the machine: Incarcerated students and the digital university. *Australian Universities' Review* 57(2): 46–53
- Hopkins S & Farley H 2015. e-Learning incarcerated: Prison education and digital inclusion. *International Journal of Humanities Education* 13(2): 37–45
- Hopkins S & Farley H 2014. A prisoners' island: Teaching Australian incarcerated students in the digital age. *Journal of Prison Education and Reentry* 1(1): 42–51
- iTalk Studios 2016. *About*. <http://www.italkstudios.com.au/about/>
- Jeans N 2017. Digital justice for all. Great Britain: Jisc. <https://www.jisc.ac.uk/blog/digital-justice-for-all-30-jan-2017>
- Jewkes Y & Johnston H 2009. 'Cavemen in an era of speed-of-light technology': Historical and contemporary perspectives on communication within prisons. *The Howard Journal* 48(2): 132–143
- Johnson BJ 2016. Jail (e)mail: Free speech implications of granting inmates access to electronic messaging services. *Washington Journal of Law, Technology & Arts* 11(4): 285–310
- Justice Action 2011. *Computers in cells: Maintaining community ties and reducing recidivism*. Sydney: Justice Action
- Knight V 2015. Some observations on the digital landscape of prisons today. *Prison Service Journal* 220(3): 3–9
- Kosman J and Dugan K 2015. Taxpayers should buy every inmate a tablet: contractor. *New York Post*, 15 Nov. <https://nypost.com/2015/11/15/service-connecting-family-to-prisoners-wants-to-expand-app/>
- Koudstaal D, Cianchi J, Knott M & Koudstaal M 2009. Creating cooperatively with all stakeholders an advanced and highly secure ICT learning network for all inmates within existing cultural prison practices. *Proceedings of the ACEA/Reintegration Puzzle Conference*. Perth: 1–21
- Ligato L 2015. New tablet will connect prison inmates to outside world. *Huffington Post* 11 Jul. https://www.huffingtonpost.com.au/entry/jp5mini-tablet-jpay-prison_n_7763640
- Maass D 2015a. *The hidden cost of JPay's prison email service*. Electronic Frontier Foundation. <https://www.eff.org/deeplinks/2015/05/hidden-cost-jpays-prison-email-system>

- Maass D 2015b. *JPay will no longer claim ownership over inmate-family correspondence*. Electronic Frontier Foundation. <https://www.eff.org/deeplinks/2015/05/jpay-will-no-longer-claim-ownership-over-inmate-family-correspondence>
- Matney L 2015. You probably can't jailbreak this tablet made for America's prisoners. *TechCrunch*, 14 Jul. <https://techcrunch.com/2015/07/14/you-probably-cant-jailbreak-this-tablet-made-for-americas-prisoners/>
- McKay C 2016. Video links from prison: Permeability and the carceral world. *International Journal for Crime, Justice and Social Democracy* 5(1): 21–37
- Ministry of Justice 2017. *Prison population figures: 2017*. United Kingdom: Ministry of Justice. <https://www.gov.uk/government/statistics/prison-population-figures-2017>
- National Offender Management Services (NOMS) 2008. *Evaluation report following survey of prisoners on use of emailprisoner.com*. <https://www.unilink-technology-services.com/staff.cfm>
- NSW Department of Justice 2017. *Annual report 2016–17*. Parramatta: Government of New South Wales
- NSW Department of Justice 2016a. *Annual report 2015–16*. Parramatta: Government of New South Wales
- NSW Department of Justice 2016b. *Video conferencing*. <http://www.correctiveservices.justice.nsw.gov.au/corrective-services/programs-and-services/support-for-families-and-the-community/video-conferencing>
- NSW Department of Justice 2015. *Annual report 2014–15*. Parramatta: Government of New South Wales
- NSW Department of Justice 2014. *Annual report 2013–14*. Parramatta: Government of New South Wales
- NT Department of Correctional Services 2015. *Annual report 2014–15*. Darwin: Government of the Northern Territory
- Open University 2016. *Virtual campus*. <http://www.open.ac.uk/about/offender-learning/data-and-developments/virtual-campus>
- Pfeifer J and Conway S 2015. *Digital gaming and corrections: Examining the potential uses for offender rehabilitation and well-being*. International Corrections and Prisons Association (ICPA) 17th annual conference, Melbourne, 25–30 October
- Phillips SD 2012. *Video visits for children whose parents are incarcerated: In whose best interest?* Washington, DC: The Sentencing Project
- Pike A & Adams A 2012. Digital exclusion or learning exclusion? An ethnographic study of adult male distance learners in English prisons. *Research in Learning Technology* 20(4): 363–376
- Rarick E & Kahan RM 2009. On prison kiosks, inmates learn job search skills. *Corrections Today* 71(4): 56–58
- Reisdorf BC & Jewkes Y 2016. (B)locked sites: Cases of internet use in three British prisons. *Information, Communication & Society* 19(6): 777–786
- SA Department for Correctional Services 2015. *Information for professionals visiting prisoners in South Australian prisons*. Adelaide: Government of South Australia
- Sellers MP 2016. Online learning and recidivism rates. *International Journal of Leadership in Education* 19(5): 632–636
- Silvester N & Jones S 2016. Violent thug who kicked teenage schoolboy to death boasts about 'easy life' behind prison bars on Facebook. *Mirror* 11 Dec. <http://www.mirror.co.uk/news/uk-news/violent-thug-who-kicked-teenage-9434951>
- Smith PS 2012. Imprisonment and internet-access: Human rights, the principle of normalization and the question of prisoners access to digital communications technology. *NJHR* 30(4): 454–482
- Standard guidelines for corrections in Australia: Revised 2012*. <http://www.corrections.vic.gov.au/utility/publications+manuals+and+statistics/standard+guidelines+for+corrections+in+australia>

Stanford P 2016. I've seen how our jails wreck human potential. Reform will take courage. *The Guardian*, 22 May. <https://www.theguardian.com/commentisfree/2016/may/22/michael-gove-courage-to-give-prisoners-second-chance-to-study>

Stone WE & Scharf P 2011. Examining the correctional technology paradox: Can correctional technologies save aggregate correctional costs? *Journal of the Institute of Justice & International Studies* 11(1): 171–184

Tickle L 2012. Distance learning breaches prison walls. *The Guardian*, 20 Feb. <https://www.theguardian.com/education/2012/feb/20/distance-learning-for-prisoners>

Tighe S 2016. Prisoners allowed access to adult films and the internet. *BBC News*, 22 Apr. <http://www.bbc.com/news/world-europe-36067653>

Tolbert M & Hudson J 2015. *Educational technology in corrections 2015*. Washington, DC: US Department of Education

Turley C & Webster S 2010. *Implementation and delivery of the Test Beds Virtual Campus: Case study*. London: Department for Business, Innovation and Skills

University of Southern Queensland 2017. *Making the Connection*. <https://www.usq.edu.au/research/digital-life/making-the-connection>

Voorhoof D 2016. *European Court of Human Rights: Kalda v. Estonia*. IRIS newsletter 2016–4. <http://merlin.obs.coe.int/newsletter.php>

**Aysha Kerr is a former intern at the
Australian Institute of Criminology.**

**Matthew Willis is a Research
Manager at the Australian Institute of
Criminology.**

General editor, *Trends & issues in crime and criminal justice* series: Dr Rick Brown, Deputy Director, Australian Institute of Criminology. Note: *Trends & issues in crime and criminal justice* papers are peer reviewed. For a complete list and the full text of the papers in the *Trends & issues in crime and criminal justice* series, visit the AIC website at: aic.gov.au

ISSN 0817-8542

©Australian Institute of Criminology 2018

GPO Box 1936
Canberra ACT 2601, Australia
Tel: 02 6268 7166

*Disclaimer: This research paper does not necessarily
reflect the policy position of the Australian Government*