TRUSTING AND TRUSTED: DEVELOPING AND DEPLOYING MOBILE DEVICES TO SUPPORT IN-PRISON LEARNING

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Abstract

A post-secondary qualification earned in prison has been noted as a factor in reducing rates of recidivism and contributing to improved prisoner behaviour. However, delivering higher education into prisons is a challenging process. In Australia, many higher education institutions prioritise online modes of delivery, and most jurisdictions prohibit prisoner access to the Internet. The lack of Internet access means that incarcerated students do not have the opportunity to experience learning in the same way as students who are not in prison. Digital technologies, including mobile devices, offer affordances in terms of providing the incarcerated student with a digital learning experience. From 2012 to 2017, a university research team in Australia has been trialling digital learning initiatives in 28 prisons across the country. The Making the Connection project aims to enhance the student learning experience using an offline learning management system and personal devices. Even so, introducing digital technology into prisons is a challenging process. Prisons have low levels of trust and strict security requirements. Digital technology must comply with jurisdictional constraints and correctional centre policies. Personal devices must be ‘prison-suitable’ yet at the same time ‘user-friendly’ for incarcerated students who traditionally do not have high levels of literacy, including digital literacy. Providing prisoners with mobile devices requires trust in two dimensions: researchers trust the prisoners to use and maintain the devices for learning purposes, and prisoners trust the researchers to provide a pedagogically-appropriate learning tool. This paper reports on the complex process of preparing and deploying mobile technologies in Australian correctional centres.

Keywords: mobile learning, research impact, higher education, research, trust.

1 INTRODUCTION

Higher education institutions have increasingly embraced digital technology as a means to deliver online learning to a dispersed student population. However, for some students, the lack of reliable access to the Internet presents problems when seeking to undertake higher education studies. In Australia, such students include those located in “rural communities, refugee communities, Indigenous communities and culturally and linguistically diverse communities” [1] where Internet diffusion rates are lower than in urban areas. For other students, such as those studying from within correctional centres, there is no opportunity to access online learning resources due to jurisdictional policies that prohibit prisoners from accessing the Internet. Incarcerated students rely upon paper-based resources that do not provide interactive learning opportunities nor enable them to develop digital literacy skills. There is good reason to provide higher education learning opportunities for prisoners. A post-secondary qualification earned in prison may reduce rates of recidivism [2], and contribute to improved prisoner behaviour [3]. Undertaking a higher education qualification while in prison enables prisoners to imagine a life on the outside, and for many, compensates for a lack of study before incarceration. Prisoners are generally from low socio-economic status backgrounds, particularly if they are Indigenous [4], with longer-term prisoners lacking in digital literacy skills that are recognised as being essential for seeking post-release employment, or for participating in contemporary society [5].

From 2012 to 2017, a university research team in Australia has been trialling digital learning initiatives in 28 prisons across the country. Four projects have progressively developed and deployed digital technology to enhance the learning experience of incarcerated students. The first project, PLEIADES (Portable Learning Environments for Incarcerated Distance Education Students), developed an Offline Study Desk that could simulate the university’s learning management system without requiring Internet access. The Offline Study Desk enabled incarcerated students to benefit from interactive multimedia learning opportunities. The second project, From Access to Success, developed and deployed a server-based Offline StudyDesk into the correctional centre environment so that correctional centre staff could manage online learning using locally networked computers. The third project, Triple ‘E’, deployed e-Readers to five correctional centres so that students could continue their...
study after they were locked down overnight. The fourth project, *Making the Connection*, developed an Enterprise Platform which is a networked server solution to enable incarcerated students to access the Offline StudyDesk. The project also developed dedicated Device Management Software to enable Offline Personal Devices to be distributed to students to support their study endeavours. The Offline Personal Device is an 11-inch Dell Notebook configured to meet the security requirements of the local prison environment. Each device is loaded with USQ Offline StudyDesk software that acts as the portal to the courseware, learning activities and assessments. Incarcerated students can take the personal device back to their cells, and continue working when confined, which helps overcome issues with restricted access to the computer labs.

The introduction of digital technology into prisons is a challenging process. Throughout the four projects, the research team worked hard to develop trust relationships with the correctional centre management and the incarcerated students, as a platform for cooperative relationships that would facilitate the introduction of digital technology into this complex and restricted environment.

### 2 METHODOLOGY

Trust is a "paradoxical phenomenon" [6] due to the way that trust is excessively afforded to strangers without justification. However, in the prison environment, low levels of trust prevail [7;8]. The deployment of digital technology into prisons requires special consideration of jurisdictional constraints and correctional centre policies. Digital technologies must be reliable, robust and secure from the perspective of correctional centre management, yet also be ‘user-friendly’ for incarcerated students who traditionally do not have high levels of literacy, including digital literacy.

During the *Making the Connection* project, technologies were specially modified to ensure compatibility with existing correctional centre systems, and to ensure functionality without compromising correctional centre security. The Enterprise Platform, developed during the *Making the Connection* project, was tested in a simulated correctional centre education lab to ensure compatibility and to identify any software compatibility issues before installation in the correctional centres. The simulated lab was created in consultation with jurisdictions across Australia. The Offline Personal Device was extensively modified before being deployed in the correctional centres. The research team made significant changes to ensure the device’s operating integrity, including disabling Bluetooth, wired or wireless network capacity, webcam, microphone and external device functionality, and ensuring user accounts were limited to specific data partitions.

Trust has remained a key consideration in achieving project objectives. Fostering trust encourages cooperation, and is noted as being important when interacting with minority groups and those suffering exclusion from mainstream society [9]. The initiatives described in this paper have benefitted from the reciprocal nature of trust [10] evident across three dimensions: between USQ researchers and correctional centre management, between USQ researchers and incarcerated students, and between correctional centre education officers and incarcerated students.

#### 2.1 USQ Researchers – Correctional Centre Management

The deployment of Offline Personal Devices into Australian correctional centres was the result of extensive development to ensure the device complied with jurisdictional restrictions while still meeting the educational needs of students as an effective learning tool. Jurisdictions and correctional centre management had strict security requirements and trusted the USQ research team to develop and deploy a learning tool that would meet security specifications.

In ensuring the Offline Personal Devices were fit-for-purpose, the research team developed dedicated Device Management Software to facilitate the allocation of devices to students, security audits and to install the appropriate courses. Such software is necessary to address strict security requirements. The Offline Personal Device consists of a hardware-software platform package featuring two log ins: 1) a student log in; and 2) an education officer log in. The student log in provides access to the USQ Offline StudyDesk and Libre Office (an open access suite of programs equivalent to Microsoft Office). The education officer’s log in provides access to the Personal Device Manager application which allows education officers to see at a glance if the security features are still in place on the device. All student activity on that device is viewable by the education officer. The Student Audit tray icon was developed to provide a way in which any correctional centre staff member could easily assess the status of the Offline Personal Device without needing the education officer log-in. By looking at the
status of the device, an education officer can tell whether the Offline Personal Device has been tampered with or has encountered some form of other problem.

After extensive development and a soft trial at two correctional centre locations, the USQ OffLine Personal Devices are now in use in 28 Australian correctional centres in the states of Queensland, Western Australia, Tasmania and the Northern Territory. A good working relationship with correctional centre management has enabled the research team to extend its original research objectives. Correctional centre management have high levels of trust in the research team and are confident of the team’s ability to meet security requirements. The priority afforded to developing good trust relationships with correctional centre management is reflected in the position descriptions of research team members. Several members of the project team are dedicated to engagement activities, with a focus on building relationships with correctional centre stakeholders and providing feedback to the project team on the roll out of technology in the correctional centres.

2.2 USQ Researchers – Incarcerated Students

In addition to securing the trust of prison and jurisdictional management, research team members also needed to develop a trust relationship with the incarcerated students. Providing prisoners with mobile devices requires trust in two dimensions. First, researchers trust the prisoners to use and maintain the devices for learning purposes; and second, prisoners trust the researchers to provide a pedagogically-appropriate learning tool.

Understanding the incarcerated student’s experience of the digital technology has been a key part of the research project and has been essential for refining the project outputs to suit incarcerated students and prison requirements. Research team members conduct focus groups with incarcerated students to collect data on how the digital technology has improved the learning experience. Focus groups are conducted at the start (and concurrent conclusion) of a given semester(s) with both enrolling (new) students and existing students. In conducting the focus groups, research team members had to develop good relationships with prisoners so that prisoners would feel comfortable sharing perspectives of the technology.

In a reciprocal way, prisoners trusted the research team that the technology provided to them would not be inferior to previously-utilised hard copy resources, nor disadvantage them in comparison to online students. The incarcerated students have been supportive of the aims of the initiative, with data suggesting that the four projects have had a positive impact on the learning experience of incarcerated students in terms of engagement and completion. As noted by one student, “In this setting having the device sitting on your bed listening to lectures is a huge advantage, didn’t have the time to do this in the educational lab, being able to look at it on demand is also really really helpful and help me address some of my procrastination issues, have now got no excuses also there's the coolness factor, it also keeps you connected with the real world and umm just seeing predictive text work...” (Incarcerated Student, Semester 2, 2016). The retention statistics are testimony to the effectiveness of the initiative. Across the four projects, the retention rate has been 76 percent, as compared to 68 percent for incarcerated students not using the technologies and 65% for general USQ students enrolled in the same courses.

2.3 Correctional Centre Education Officers – Incarcerated Students

Active, engaged correctional centre education officers were critical to the success of the initiative. Correctional centre education officers are located at each correctional centre and assist incarcerated students to navigate university processes, learning and administrative. The research team recognised that developing strong relationships with the education officers would facilitate the deployment of technology. To develop good trust relationships, research team members visited correctional centres on a regular basis to conduct training sessions with education officers, and education officers visited the university to participate in induction sessions.

Correctional centre education officers worked closely with the research team to ensure that the digital technology would meet the needs of the incarcerated students. Education officers have been supportive of the initiative, noting that “the OffLine StudyDesk has made a difference with students engaging as if they are university students” (Education Officer, Semester 2 2015). As suggested by one education officer, “The students are ‘absolutely’ enthusiastic about the courses and OffLine StudyDesk, and it is definitely attracting students” (Education Officer, Semester 3 2015). Another commented that: “The prisoners are very enthusiastic about the OffLine StudyDesk as they have
access to all the material and they know specifically what they need and when they need it by” (Education Officer, Semester 2 2015).

In seeking to reinforce the trust relationship with correctional centre education officers further, the research team established a telephone hotline so that education officers could seek technical assistance at any time. The hotline has provided support for education officers with setting up new servers and Offline Personal Devices, loading software and course materials onto the servers and personal devices, and setting up student logins to provide incarcerated students with immediate access to learning resources.

3 CONCLUSIONS

The findings from this research suggest that incarcerated students have an enhanced learning experience as a result of the digital technology initiatives deployed in the correctional centres. However, the initiatives have delivered other benefits. Introducing digital technology into the correctional centres has encouraged trust relationships between USQ researchers, correctional centre management, correctional centre education officers and incarcerated students. The trust relationships provided the platform for achieving cooperation across stakeholders and enabled the project objectives to be achieved in a timely and efficient manner. Further work is suggested to explore the multiple dimensions of trust evident in this project, and to understand the significance of trust as a key consideration in developing and deploying digital initiatives to populations excluded from accessing the Internet.

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REFERENCES


