

Bridging the digital divide: bringing e-literacy skills to incarcerated students

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Incarcerated students face a number of additional challenges to those faced by most other students studying at a distance. Lack of internet access is especially problematic for those studying in a sector that is increasingly characterised by online course offerings. This paper reports on a trial project that will attempt to address the digital challenges that hinder access to higher education by incarcerated students, and to provide them with inclusive learning experiences. The trial utilises Stand-Alone Moodle (SAM) and eBook readers with a small sample of incarcerated students participating in the Tertiary Preparation Program (TPP) at the University of Southern Queensland (USQ). This project potentially addresses the digital divide experienced by incarcerated students as compared to the general student population. It is anticipated that students will participate in learning experiences more closely related to those experienced by students who study in online environments, that and they will acquire relevant e-literacy and e-research skills.

Keywords: digital inclusion; distance learning; higher education; prisons; Moodle; eReaders

Introduction

Australia's prison population averaged 29,106 adult prisoners in 2011 (ABS, 2011). Most prisoners are from low socio-economic status (SES) backgrounds and are likely to have experienced social and economic disadvantage. As a result, in comparison with the general Australian population they experience a relatively high chance of unemployment on release, face on-going health and social problems and have limited work experience (Giles, Le, Allan, Lees, Larsen & Bennett, 2004). Contemporary studies demonstrate that the rates of recidivism are significantly lower for prisoners undertaking a post-secondary educational program while incarcerated, compared to the general prison population (Richards et al., 2008; Aceves et al., 2011). Distance education (DE) has traditionally been viewed as a boon to education in prisons, delivering education to students that are unable to undertake traditional face-to-face education (Salane, 2008). However, the increasing reliance on e-learning has resulted in greater challenges for incarcerated students attempting to participate in higher education (HE). Almost universally, prisoners are not permitted any access to the internet, and ICTs often pose an unacceptable security risk.

PLEIADES (Portable Learning Environments for Incarcerated Distance Education Students) is a trial project undertaken by USQ to address some of the barriers to participation in HE by incarcerated students. The aim is to trial the use of e-learning technologies which are independent of the internet, yet still enable students to access USQ courses electronically. The learning technologies to be piloted include an internet-independent version of USQ's Learning Management System (LMS) specifically developed for the project called Stand-Alone Moodle or SAM. SAM will replicate USQ's online learning environment for incarcerated students by enabling them to view and use the same course materials and assessments embedded in the USQ LMS but in a simulated online environment without internet access. The use of SAM in PLEIADES will also be supported by the use of eBook readers. The eBook readers will enable incarcerated students to access course and reference materials in order to extend learning beyond their very limited access to the correctional centre computer lab and into personal and leisure time. In this way, a learning experience comparable to the experience of non-incarcerated students studying the same program at USQ will be provided for incarcerated students. The project will be deployed in Semester 2 2012 with a maximum cohort of 15 incarcerated students enrolled in *TPP7120 Studying to Succeed* as part of the Tertiary Preparation Program at the Southern Queensland Correctional Centre (SQCC).

Current provision of tertiary education in prisons

The role of education in prisons serves two purposes: increasing opportunities for employment after release, but also most importantly, improving self-esteem and self-confidence to assist in avoiding the negative lifestyle temptations that contributed to the initial incarceration of offenders. As a result, a greater emphasis has been placed on education opportunities for prisoners. Studies have found that participation in formal education programs have generally been successful in reducing recidivism (Callan & Gardner, 2007). Even so, participation remains low with 35% of eligible prisoners in 2009-10 participating in accredited education courses. The decision to participate in education depends on a number of factors including the length of sentence, the constraints of sentence management plans, the capacity of Education Officers to provide learning support, the demands of in-prison employment the availability of programs and courses (Giles et al., 2004). Overcrowding and restricted access to computers further limits prisoner access to education (BearingPoint Review, 2003). Prisoners are hampered in their choices by the extent to which courses require students to access online activities. Correctional centres are reliant on tertiary education institutions for the provision of DE for offenders who wish to participate in HE (Dorman & Bull, 2003). Preparatory, undergraduate and some postgraduate programs have traditionally been accessible to prisoners in print-based forms. These materials are sometimes supplemented by visits from teaching staff, depending on the location of the provider. Provision of education services to prisoners is becoming increasingly problematic given the increasing reliance on digital and mobile delivery of materials and assessment.

Information Technology and Lack of Internet Access as Barriers to Prison Education

The 'USQ Connected' initiative is representative of the broader sector's increased reliance on online delivery. Though the increased use of technology does help address the emerging demand for flexibility in learning, it also excludes significant portions of the student population including incarcerated students (Aceves et al., 2011). Currently, supporting incarcerated students to successfully undertake university studies requires Education Officers at correctional centres to spend time liaising with universities, carrying out the online research that students need to fulfill the demands of the course, and printing out that information for the students. A major challenge for future DE provision to this cohort is to identify alternatives that will allow prisoners to access the LMS while maintaining the necessary security. Although the traditional forms of delivery using hard-copy are successful to a certain extent, they do not enable incarcerated students to develop the e-literacy skills that are essential in current education environments. Most prison education centres provide access to computers which inmates may access for a few hours under strict supervision. Some prisons run in-cell laptop programs for students engaged in tertiary studies (BearingPoint Review, 2003). Incarcerated students are unable to access course materials and multimedia supplied via the course LMS (at USQ an instance of Moodle called the 'Study Desk') and they are unable to complete assessment requirements of courses online. Most significantly, they are unable to communicate with other students outside of the facility and even within the facility through course discussion boards. This undermines the social constructive pedagogy favoured in many post-secondary programs (Erisman & Contardo, 2005; Bowden, 2002) and poorly prepares students for a world in which employers expect their employees to be familiar with social networking and other web 2.0 resources. The imperative to address this digital divide for these students is acute.

Addressing digital inequities using secure learning technologies

The PLEIADES project resulted from discussions between staff at the SQCC, Queensland Corrective Services (QCS), the Australian Digital Futures Institute (ADFI) and the Open Access College (OAC) the latter two organizational units being located within USQ. OAC has sought to support students in disadvantaged or vulnerable groups through the provision of a Tertiary Preparatory Program (TPP) articulating into various degree pathways. TPP is offered by the OAC to prospective students over the age of 18 who cannot gain entry via traditional pathways. Typically, these students are from low SES backgrounds and may have experienced educational disadvantage (Klinger & Wache, 2009). If the TPP is to prepare students for university studies that incorporate the use of the online Study Desk, then developing e-literacy skills have to be an integral part of the course (Orth & Robinson, 2010). A significant number of incarcerated students enroll in the TPP and, for this cohort in particular, the educational aims of the program can be difficult to achieve. The course which is the focus of the PLEIADES project is *TPP7120 Studying to Succeed*. Because of their lack of internet access, incarcerated students have received large blocks of printed matter containing course materials and resources. This is costly for USQ to assemble, print and post, and is in no way interactive.

Stand Alone Moodle

The PLEIADES project team determined that in order to provide an equivalent study experience for incarcerated students as compared to non-incarcerated students enrolled in *Studying to Succeed*, it would be necessary to replicate the course Study Desk. This alternate instance of the LMS could have no possible communication to the internet. It would have to be wholly contained on the correctional centre education server with installation and harvesting of results being conducted using flash drives by USQ's Division of ICT or SQCC education personnel. USQ has been working closely with Queensland Corrective Services to define the functionality of the SAM Study Desk that would comply with ICT and security constraints. This modified LMS will be installed on the educational server at SQCC and will be accessed via the network of computers available to students in a designated education lab located at the correctional centre. Incarcerated students will be able to access course materials as well as to complete quizzes and participate in discussion boards via the SAM LMS. The discussion boards will only be accessible to the incarcerated students while located in the correctional centre's education computer lab and under the direct supervision of Education Officers. It is expected that Education Officers will 'strip' the course assessment items prepared by students from SAM and submit them directly into the USQ online assignment submission system. Education Officers will have administrative rights to this system to streamline the process. In this way, incarcerated students will be able to gain many of the e-literacy skills they will need in a simulated online environment without having or needing access to the internet, thus completely avoiding those security risks engendered by prisoner access to the internet.

eReaders

Students within correctional centres are often juggling part-time study with work commitments. An incarcerated student undertaking a part-time study program may only have access to the relevant computer lab one afternoon a week. There is an in-cell laptop computer borrowing scheme that some incarcerated students are able to access. Even so, the opportunities to extend learning beyond the education lab are limited and laptops are not available to students enrolled in the TPP program (these are reserved for students enrolled in degree programs). In response to this need, the PLEIADES project team will pilot an eBook reader scheme to run in conjunction with the SAM trial. eBook readers are small portable electronic devices which can hold a large number of electronic files such as electronic books (eBooks). The eBook readers in the trial will be loaded with course study materials and additional study resources of potential use to the students. The eBook readers selected for use in the trial are Sony PRS-505s, chosen because they do not have any ability to connect to the internet either via wireless or 3G networks. In addition they cannot connect remotely to another device other than through a specific cable which will be retained by the education officers. They have a long battery life that can be measured in weeks or months. The eBook reader batteries are an integral part of the device and cannot be removed or modified without damaging it. For the pilot project, course materials and associated reference material will be vetted for copyright compliance and converted into ePub format for loading onto the Sony eBook readers to be provided to incarcerated students enrolled in the *TPP7120 Studying to Succeed* course. An eBook reader borrowing scheme will be set up by Education Officers at the SQCC, similar to the one that already operates to manage the borrowing of in-cell laptops. The eBook readers are charged using a cord that plugs into a USB port of a computer; in this case, an Education Officer's computer. Students using the devices will be able to hand their eBook readers to Education Officers on specified days for charging. They will be able to take the eBook readers back to their cells to browse readings, watch embedded multimedia, take notes on readings and thereby extend their study into their private time.

Evaluation

The pilot project will be evaluated using a design-based evaluation methodology to determine whether these learning technologies are able to improve access, retention and completion rates of incarcerated students as well as give them an experience comparable to that of distance students who are not incarcerated. The project will be deployed in July 2012 at the Southern Queensland Correctional Centre. An evaluation of the trial project will be carried out, involving the correctional centre education staff, the incarcerated students involved in the project, the course lecturers, and correctional staff responsible for IT security. Much of the research that has been conducted in correctional centres has failed to reflect the views of prisoners themselves (Richards et al., 2008). Consequently, ethical clearance has been obtained from USQ and the Queensland Department of Corrective Services so that quantitative and qualitative data can be collected from Education Officers, course lecturers and most importantly, from the students themselves.

Conclusion

USQ delivers programs to a large cohort of students from regional, remote or rural areas within Australia as well as internationally, in addition to incarcerated students. These students are frequently from low socio-

economic backgrounds and they often experience difficulties in gaining access to the internet or using mobile devices. USQ and other distance education providers, therefore, need to address the issue of lack of internet access if they are to continue to remain viable providers of HE within these environments. At present there are very few other prisons in Australia or globally that have successfully implemented electronic or mobile learning for incarcerated students. USQ expends large sums of money and resources on printing materials for students and providing individual alternatives to students who are unable to access online resources. USQ personnel are independently developing alternative approaches on a case by case basis without support from USQ policy or processes. The development of secure learning technologies such as SAM and eBook readers for prison education will result in improved quality and consistency of educational initiatives, encourage student-centred learning and provide learning opportunities that can be tailored to a student cohort that has greater educational needs than most members of the general community. Results from the project outcomes will inform USQ, the Queensland Department of Corrective Services, and other stakeholders on innovative technological approaches to enhancing the digital inclusion of learners who cannot access the internet, and of the needs of students in areas where internet access is not possible such as in corrective facilities, remote Australian Indigenous communities, and other rural and remote communities.

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