Competency reference number and title	B14: Digital curation: Preserving born-digital and digitised records and archives
Level of attainment claimed	Level 3
Development period: Overall dates in which competency was developed for this assessment level	2017- 2021

Context

Give a brief outline of the context in which you developed this competency. For example, your previous and current job roles or responsibilities

I developed my knowledge of digital curation during my postgraduate. I used BitCurator, checksum algorithms, and theoretical models of digital preservation, such as the Open Archival Information System. In 2017 I undertook a project at the [redacted] identifying hexadecimal file format signatures for submission to the PRONOM database at The National Archives (TNA). In July 2019 I joined [redacted] as a digital archivist.

Activity

Give a brief description and examples from your professional activity and practice which demonstrate your competency at this level. Link this section to the competency definition in the Framework.

Between July-November 2019 I developed digital archive procedures at [redacted]. I revised a policy for accessioning digital archive materials, and procedure documents for depositing new digital archive collections and using the digital archive quarantine system. I used existing digital archive documentation, as well as 'Digital Preservation Policy: Guidance for Archives' by TNA and 'Digital Preservation Policy Development' by the Digital Preservation Coalition (DPC).

In August 2019 I assessed a kyroflux machine as a tool to extract born-digital records from 5.25" floppy disks. I conducted this assessment because 5.25" floppy disks had been identified as an at-risk storage media by DPC Technology Watch. I demonstrated how the kyroflux machine could extract and preserve digital records using disk imaging. I demonstrated the limits of this technique by showing how floppy disks with scratches or other physical damage resulted in damaged digital records. This feedback was later used by the digital archive to review other at-risk storage media, such as VHS and U-matic tapes.

During October 2019 I analysed over 400 unique file formats held in the digital archive. Many of these file formats were not suitable for long term preservation, being either proprietary or obsolete file formats. I identified that some archive users were regularly placing at-risk records in the digital archive. To reduce risk in the digital archive I wrote a guidance document that identified preferred and accepted file formats and circulated this amongst archive users.

During November 2019-March 2020 I applied digital curation policies and procedures during a mass digitisation project. I implemented a quarantine procedure for externally generated digitised records. I used a non-networked computer to scan digital records for malware and recorded my findings in a digital accessions spreadsheet. I also trained an archives officer to do this.

Progression and Learning

Give a brief summary of how your skills, knowledge and experience within this competency have developed or been maintained during this period. Include examples of the different skills, knowledge and experience developed and the types of learning undertaken such as formal training, study or research, work achievements, contributions to the profession etc.

At the start of my development, I was familiar with digital archive documents from [redacted] and the [redacted]. I read sector-leading guidance on digital archive policy and procedure to improve my awareness of best- practice. Through reading documents from the TNA and DPC, I identified how to write good digital preservation policy, such as writing documents in clear, natural English. This allowed documents to be circulated with non-specialist users. I practiced this by writing about preserving digital photographs on my personal blog.

In September 2019 I attended the Archives and Records Association conference. I attended a presentation on web archiving by the National Records of Scotland, the Internet Archive, and the National Library of Ireland. I also attended a workshop for the DPC's Rapid Assessment Model. These workshops made me consider the challenges of applying digital preservation procedures for large digital repositories.

I taught myself to operate a kyroflux machine using user manuals and online tutorials. Operating a kryoflux machine involved using a command line interface ('Command Prompt' in Windows 10). I taught myself how to use Command Prompt using YouTube tutorials and the Windows Help documents. I wrote an instruction document for the HES digital archive on how to operate the kryoflux machine. I also gave informal training to my colleagues on how to troubleshoot problems with Command Prompt.

I also consulted the National Digital Stewardship Alliance (NDSA) Levels of Digital Preservation. This helped me realize that digital preservation is a spectrum of activities and gave me a benchmark to assess my own policies and procedures. This informed how I trained my archives officer to handle new accessions. I identified our current tools (non-networked PC, file identification software) and demonstrated how these supported the security of our digital repository. I also demonstrated how future developments would add further security and records integrity (such as write-blockers).

Reflection

Reflect on and evaluate what you have learned from the activities you have undertaken to develop or maintain this competency. For example, what went well/not so well? What would you do differently next time?

When I started working at [redacted] I was familiar with digital preservation policies and procedures at specific institutions. I also had a theoretical understanding of digital preservation from my postgraduate. However, I was not confident in improving existing policies and procedures. I have improved my confidence in assessing, writing and editing digital preservation policies by researching sector best- practice. I consolidated my learning by writing for my personal blog.

I improved my ability to fully apply digital curation procedures by communicating them to my colleagues and the public. While developing this competency I realized that explaining "why" as well as "how" is an effective communication technique.

At the start of my development I struggled to communicate digital curation to archive depositors. Some depositors interpreted new procedures as unnecessarily restrictive, such as limiting accepted file formats. On reflection I realize that I had distributed a new digital preservation procedure, but I

hadn't explained why this new procedure was being implemented. Following this I hosted small meetings with important depositors, where I explained that preserving at- risk file formats could lead to obsolescence. This improved understanding amongst these depositors, and improved procedure compliance.

Follow Up

How have you applied your skills, knowledge and experience within this competency since? What do you intend to do next to maintain or further develop this competency?

Since developing this competency I have been employed as a digital archivist for [redacted]. In this role I am responsible for the long-term preservation of digital records generated by the project over five years, including 3D photogrammetry models. I will be depositing this project data with both the [redacted] digital archive and the University of Edinburgh data service, as well as other third party repositories. To build stakeholder trust in the project, I will use small meetings to clearly explain the how and why of digital preservation. Through my work at [redacted] I have strengthened my academic knowledge with practical experience in digital preservation. In the future I want to refine my knowledge, focusing on digital repository systems (such as Preservica). This will allow me to make more informed strategic decisions regarding long term digital preservation.