ASCILITE 2023

People, Partnerships and Pedagogies

Finding function in dysfunction – The role of a learning technologist: A case study of Panopto

Shareeni Kala and Mohammad Ladha

The University of Auckland.

This conference paper examines the pivotal role of Functional Analysts in facilitating the transition from an older in-house Lecture Theatre Recording (LTR) system to a new and advanced lecture recording system called Panopto. The Functional Analysts' responsibilities encompass ensuring a smooth transition, providing expertise and assistance to internal users, and maintaining uninterrupted operations. The paper discusses the process of transitioning to Panopto, including planning, implementation, training, and support. The collaboration, communication, and technical expertise of Functional Analysts are highlighted as key factors for successful system migration. The findings of this case study shed light on the importance of proactive planning, effective change management, and technical proficiency in executing such transitions.

Background:

The role of a Functional Analyst like the title says comprises of multiple avenues of dysfunctions, we on the daily basis take charge of these avenues to seek function in said dysfunction. We are responsible for a diverse range of tasks to ensure the smooth functioning of internal systems and applications. Serving as knowledgeable resources, we provide expertise and assistance to internal users, ensuring a comprehensive understanding of application functionality. Our role involves offering support for applications and conducting "Train the Trainer" sessions to mentor colleagues in effectively utilizing products. We play a crucial role in providing input for requirements, high-level design, analysis, and documentation.

In terms of implementation, we utilize multiple tools for planning to achieve desired business outcomes. We configure applications to align with specific business processes and provide technical support during cyclical activities. We are primarily assigned to a singular project but are often re-allocated to others during high output periods. This requires us to have the ability to upskill and understand the work of any other team and become Subject Matter Experts(SME) within minimal amounts of time through efficient documentation and learning processes.Swift resolution of incidents is a priority, as we strive to minimize disruptions and restore normal operations promptly. Generating reports as necessary and documenting procedures and systems contribute to efficient knowledge sharing within the organization.

Collaboration is an essential aspect of our work, as we foster a team-oriented culture, build positive relationships, and actively contribute to improving software development practices. We effectively communicate technical implications in clear terms and provide constructive feedback to enhance processes. In all engagements, we represent Connect (UOA's IT department) in a positive light, deliver high-quality customer service, and actively seek feedback from stakeholders to continually enhance processes, service delivery and maintain seamless operations.

For the past few decades, the in-house managed LTR system known as MediaStore was used for scheduling Lecture recordings seven days in advance booking of room booking for video or audio recording. This was possible for must record for a term basis such a semester or quarter and ad-hoc basis. The recorded media copy was sent to the Learning Management System (LMS), Canvas as an integrated system. The teachers had the ability publish the recording with 72 hours after having the ability to edit it. Students were able to view or download the streaming and have access up to 18 months since their enrolment to the course. This was not a single tool that was used for recording and uploading to Canvas. The solution was to introduce Panopto, a vendor product. This allowed for a seamless transition of video content between systems which aided users in creating, editing and scheduling lecture recordings.

Rationale:

Cloud-based video content management systems with robust features are being increasingly adopted by universities worldwide. These systems cater to diverse storage and distribution needs, ensuring fast, easy, and reliable access for students, particularly those off-campus. Features such as transcoding, captioning, annotating, content searchability, variable speed playback, and live streaming are no longer considered optional but have become essential to meet student expectations and enhance their learning experience. Additionally, analytics play a vital role for academics in assessing the effectiveness of published content.

Failure to improve the video platform poses an opportunity cost, leading to a potential loss of international students, especially those who heavily rely on video recordings. It also risks diminishing student goodwill, especially considering that platforms like Zoom offer transcriptions during lockdown situations. Moreover, the high efforts required by staff to record, edit, and publish video content can lead to reduced engagement and morale among staff members, which may ultimately impact the quality of teaching and helps to fulfil one of the priorities of Taumata Teitei[1]—providing an equitable student experience. Having evidence to support student success and academic achievement is crucial to ensure that students are not disadvantaged in their learning activities.

Case Study: Transitioning to Panopto

This section presents a case study that illustrates the successful transition from the older LTR system to Panopto. It explores the step-by-step process followed by Functional Analysts, including challenges encountered, lessons learned, and key outcomes achieved.

Current limitations

The aging LTR application poses a significant risk of frequent failures, leading to disruptions in the learning and teaching process. It is a single point of failure with limited options for modernization. Moreover, the application lacks essential features that students expect such as captioning, transcripts, annotations, searchability, variable playback speeds, direct integration with syllabus systems for scheduling, built-in editors for non-LTR content, and a repository for video recordings not captured via LTR analytics.

International students are provided with lecture recordings that lack captions or subtitles, which falls short of their expectations (Gernsbacher 2015). Additionally, the experience differs when Zoom is used, as it has the capability to provide transcripts. This discrepancy creates challenges for staff who need to invest significant efforts in recording, editing, uploading, and linking video recordings for offshore students.

Furthermore, the current video platform has the potential to negatively impact academic performance. Students with accessibility needs must rely on note takers for in-person lectures, creating additional burdens and potential disadvantages.

New tool Panopto

Panopto presents a centralized and secure platform specifically designed for seamless campus-wide video hosting. It offers a dependable location for hosting videos, ensuring easy access and searchability for both students and faculty. Users can annotate videos and enjoy uninterrupted viewing experiences across multiple devices. The platform boasts a user-friendly web-based editor, a publishing system, and comprehensive viewing analytics. Furthermore, Panopto seamlessly integrates with popular tools like Canvas Learning Interoperability Integrations (LTI), Zoom, and open Application Programming Interfaces (APIs).

In terms of accessibility, Panopto automatically provides captions in English as the default setting for all lecture recordings, guaranteeing an accuracy rate of 80% or higher. This ensures consistent experiences for students when accessing video recordings and transcripts, catering to their diverse learning needs. Moreover, the implementation of Panopto reduces the workload for staff by simplifying the processes of recording, editing, and publishing video content. As a result, there is increased consistency across all recorded materials.

The availability of transcripts in Panopto greatly benefits students, providing them with valuable resources for studying and reviewing course materials. Consequently, many students no longer require the assistance of reader-writers during lectures, allowing for resource reallocation towards supporting students with accessibility

---

[1] https://www.auckland.ac.nz/en/about-us/about-the-university/the-university/official-publications/strategic-plan.html

needs in other areas. This comprehensive approach promotes enhanced academic performance and empowers students by fostering equitable learning opportunities.

By providing high-quality infrastructure, Panopto supports teaching, learning, research, and community engagement, delivering seamless and equitable experiences. It ensures the maintenance and efficient utilization of existing infrastructure, resulting in accessible and equitable learning opportunities across all faculties. Additionally, the platform facilitates the recruitment and retention of offshore students, improving the overall student user experience. Teachers benefit from time efficiency when recording, editing, and uploading content, while students gain accessible higher education opportunities that meet their diverse learning needs, leading to better academic performance and compliance with accessibility standards.

Weaving functional analysis into project management

A Functional Analyst is essential in project management, serving as a vital link between business requirements and technical implementation. They gather and analyse business needs, working closely with stakeholders to define project scope and deliverables. Functional Analysts contribute to system design by translating requirements into functional specifications, collaborating with technical teams. They facilitate effective communication between business stakeholders and technical teams, ensuring understanding and managing expectations. Functional Analysts also play a role in documentation management, quality assurance, and change management, ensuring the project's success and alignment with business objectives. Overall, their expertise is crucial in delivering value and meeting stakeholder needs in software development and system implementation projects.

The transition to Panopto involves several key milestones that encompass detailed planning, delivery, and the eventual transition to normal operations. These milestones are as follows:
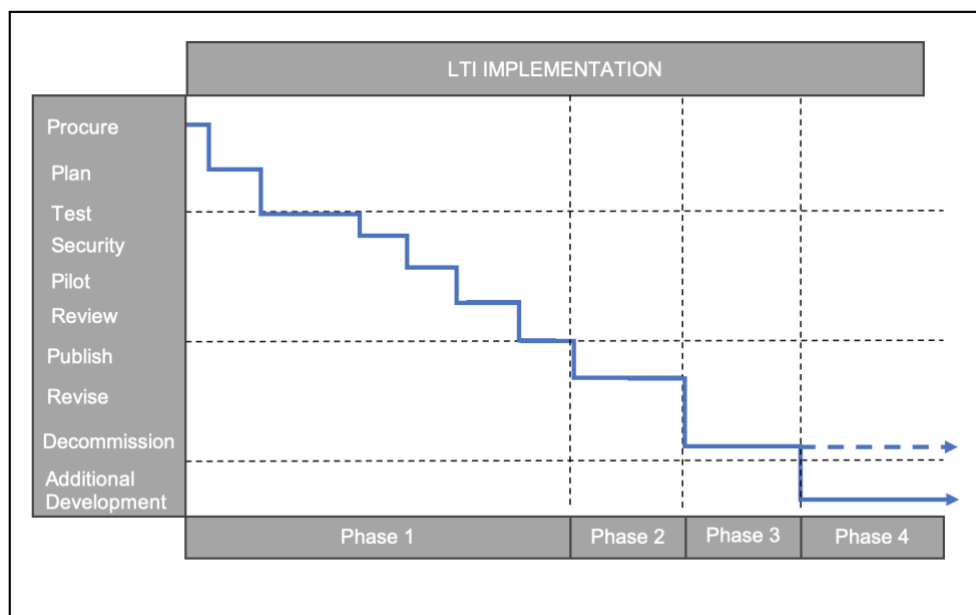

Figure 1. Showing the amount of time taken by each phase. Also note: Due to the type of Data, Decommissioning runs parallel to upgrades.

Phase 1:
In the second half of 2021, the first phase involves implementing Panopto LTI, which replaces the existing MediaStore. This phase also includes LTI setup, Single Sign-On integration, and running a pilot program for selected courses.

Phase 2:
Expected to be completed in 2022, the second phase focuses on enhancing the functionality of Panopto. It involves automatically publishing captioned lectures to Panopto for all courses, integrating Panopto with Zoom for seamless video conferencing experiences, and integrating Panopto with H5P to enhance interactive learning capabilities.

Phase 3:
Scheduled for 2023, the third phase centres around replacing the current LTR scheduling application. Panopto and Extron will be utilized as the new scheduling tools, ensuring a streamlined and efficient scheduling process for lecture recordings.

Phase 4:
In the second half of 2023, the fourth phase entails moving from LTI 1.1 to LTI 1.3. This upgrade ensures compatibility with the latest LTI standards, allowing for enhanced integration and functionality within the learning environment.

These milestones serve as critical stages in the comprehensive planning and implementation of Panopto as the new video content management system, leading to a seamless transition and improved video recording and management capabilities.

Findings

As we can see in the findings reported via a survey which was taken post the first semester of Panopto being in place. The overall feedback was positive, and students responded well with the change. Working towards our Strategic vision of Taumata Teitei, we could quantify the success of this project and currently are working out way through improvements.

Feedback shared from Disability Services during Semester 1, 2022. Note Takers[2] who support students need to have knowledge of the discipline/topic in order to take accurate notes for students. Key users of this service tend to be deaf and blind students and those with significant physical impairments that restrict them from writing. Here are some constructive feedbacks from students:

> Although not 100% accurate, helps stop the mind from wandering. Student watches at 2x speed and reads the captions to help focus. Very helpful as each lecturer has a different accent, so adjusts speed accordingly. (COMSCI/FINANCE/MATHS student)

> Lectures with no subtitles are a pain. Most courses do have subtitles. In one they intentionally turned off, as one thing was offensive. They said, if they have special circumstances they can email and request a transcript. The captions are better than the transcript. (LAW/GEOG student (3 papers))

> I wanted to try out Panopto's captions before requesting a note taker. I'm happy to report that the captioning has been a huge help with my experience in lectures and I won't need note-taker assistance this year. (CHEMMAT student (5 papers))

> Student enrolled in these courses said they didn't need note taker support as they had Panopto recordings (with captions). (LAW and CRIM/SOCIOL student (5 papers))

While testing Māori phrases in Panopto we were amazed to find there are some kupu reo in Panopto global English. They are missing the macrons (e.g., Maori instead of Māori). Some are places (Ihumātao) and people (Nanaia Mahuta) that were in the news in the last few years.

Māori kupu in Panopto:

- Akaroa,
- Hapu, Ihumatao, Iwi,
- Kaitiaki, Kahu, Kaipara, Kaka, Karua, Katoa, Kaumatua, Kaupapa, Kauru, Kotahi, Kura,
- Mahuta, Maori, Matara,
- Nuku, Oranga, Rotorua, Puna,
- Wahine, Waitangi, Wiki
- Tamaki, Tangaroa, Tangata, Tamariki, Tarawa

---

[2] https://www.auckland.ac.nz/en/students/student-support/personal-support/students-with-disabilities/support-for-current-students/note-takers.html

Through various other courses we also identified improvements which are continuously being put in place to acknowledge and align ourselves with the languages we use. Whilst All of this was done amongst the first 3 phases. We have a lot to learn and make better along with support from our vendors.

Conclusion

During the pandemic, teaching staff faced challenges as they had to use multiple tools to record, edit, add, and publish alternative video recordings to Canvas. This increased staff overheads during remote teaching. Having a standardized recording and editing tool integrated into the video platform would enable more efficient content creation and sharing among staff members. However, the existing MediaStore lacks analytics capabilities, preventing teaching staff from gauging student engagement and consumption of video content. Furthermore, many students arrive at the university with expectations of closed captions or transcripts, which are commonly provided on other video platforms or at their previous institutions, leading to unmet expectations (Whitney, Dallas 2019).

To address these challenges, it was necessary to ensure that teachers have access to appropriate technological tools, considering the growing number of international students starting their University of Auckland degree remotely. The goal was to optimize online learning and align it with the long-term objectives of the university's media management system. Enabling systems like Visual Studio and Jira play a crucial role in the technologist's ability to manage new solutions. A systematic approach is followed, involving LMS testing, completion of tests with requestors or through pilot programs, IT security assessments to mitigate risks, and finally launching the solution in production environments where teachers and students can access the application.

References

Gernsbacher, M. A. (2015). Video captions benefit everyone. *Improving Society, 2*(1), 195-202. https://doi.org/10.1177/2372732215602130

Ma Regina, M. H., Caringal-Go, J., & Magsaysay, J. F. (2018). Implicit change leadership, change management, and affective commitment to change: Comparing academic institutions vs business enterprises. [ICL, CM and affective commitment to change] *Leadership & Organization Development Journal, 39*(7), 914-925. https://doi.org/10.1108/LODJ-01-2018-0013

Ranga Auaha Ako, UOA (2023), Panopto Video Retrieved from https://teachwell.auckland.ac.nz/support/learning-technologies/panopto/

The University of Auckland (n.d.) *Note Takers*. Retrieved from https://www.auckland.ac.nz/en/students/student-support/personal-support/students-with-disabilities/support-for-current-students/note-takers.html

The University of Auckland (n.d.) *Taumata Teitei | Vision 2030 and Strategic Plan 2025*, Retrieved from https://www.auckland.ac.nz/en/about-us/about-the-university/the-university/official-publications/strategic-plan.html

Whitney, M., & Dallas, B. (2019). Captioning online course videos: An investigation into knowledge retention and student perception. In *SIGCSE '19: Proceedings of the 50th ACM Technical Symposium on Computer Science Education, February 2019* (pp 511–517). https://doi.org/10.1145/3287324.3287347