

Developing an Open and Distance Learning (ODL) Course Catalogue for the Pacific

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Abstract: Open and distance learning (ODL) is an important channel for increasing education opportunities and outcomes. It is particularly relevant for the Pacific, given small dispersed remote populations and limited access to secondary and post-secondary opportunities in rural and outer island locations. Despite the importance of ODL to the region and the immediate need to build capacity, there has been limited investment. The COVID-19 pandemic has further reinforced the need for the Pacific to be well-prepared for non-contact teaching and learning approaches outside traditional classroom-based practices. This paper charts the development of an ODL course catalogue, as part of a wider initiative, to build capacity by assisting classroom-based teachers to locate professional development opportunities in and through ODL. The process began with the development of a concept note and an attempt to survey what training was already available in the region. This led to the development of a prototype which was subsequently reviewed through three different stakeholder lenses. The combined feedback from these reviews was then used to inform development of a request for proposals to create the fully fledged version of the ODL course catalogue. Based on this experience, and approached from a pragmatic perspective, the paper will identify some key principles for development work of this nature, particularly within the Pacific region.

Keywords: Pacific, Open and Distance Learning (ODL), course catalogue

Introduction

Since its formation in 1987 by Commonwealth Heads of Government, the Commonwealth of Learning (COL) has been promoting the use of open and distance learning (ODL) to provide access to and success in learning opportunities for youth and adults unable to access traditional campus-based provision. The Pacific region is one in which ODL could play a significant role given small, dispersed and remote populations and limited access to secondary and post-secondary opportunities in rural and outer island locations. In addition, campus-based provision has often been disrupted due to tropical storms, volcanic activity, tsunamis, drought and, more recently of course, the COVID-19 pandemic. Despite its potential, and some interesting recent developments, outside of New Zealand the potential of ODL in the Pacific remains relatively untapped (Hollings and Naidu, 2020; Mays, 2022). This paper outlines the process that was followed to address one part of the challenge.

Literature review and context

The potential of technology-enabled learning to address some of the challenges facing campus-based provision in the Pacific region has been recognised for some time (Kala, 2013; Kidu, 2018; Vaa, 2015) and a recent study at the higher education level indicates that growing numbers of students have access both to a digital device and to the internet (Johnson, et al., 2021) which would make expanded use of technology-enabled ODL more feasible. However, other studies have suggested a mismatch between learner preferences and instructor beliefs which may mean that such provision is not always optimally aligned (Raturi, 2021, Va'ai, 2016)). In addition, there is need to ensure that courses are designed and mediated in ways that are sensitive to the cultural diversity of the region (Mordecai, 2018). This means that teachers are key to the success of new approaches and how we train, re-train and support teachers is a critical success factor (Chan Mow, et al., 2017; Mays, 2021). Given that the experience of many current teachers, and probably also Ministry officials, has been shaped by campus-based provision, the question then arises as to where teachers can find the training courses they need to embrace technology-enabled ODL provision.

In a project supported by the New Zealand's Ministry of Foreign Affairs and Trade, PACFOLD Learn, which is hosted by the University of the South Pacific, has partnered with COL to implement a project to contribute to enhanced capacity and efficiency of Pacific education sectors through greater use of innovative delivery mechanisms and technology. The project works with the nine Commonwealth countries in the Pacific, which are:

Fiji, Kiribati, Nauru, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. (See <https://pacificpartnership.col.org/>)

The project focuses on the following four areas:

1. Immediate response to COVID-19
2. Supporting Youth Employment
3. Building resilience in Pacific Education Systems
4. Supporting Activities.

Ongoing professional development for teachers in distance learning sits within the third area of the project – Building resilience in Pacific Education Systems. The workstream has three components:

1. Mapping existing programmes by levels, duration, focus and mode
2. Developing a course portal that can be searched for matching programmes to requisite skills development areas
3. Hosting, upgrading and updating a course catalogue portal and contents on a continuous basis based on feedback from users in the Pacific region.

The course catalogue was preferably to be built on open-source software and to be configured to work even in low-bandwidth environments as well as on mobile devices. This would create a single space where teachers would be able to locate courses that might be relevant to their continuing professional development needs without needing to visit the websites of multiple providers.

This paper focuses on the process followed in developing the ODL course catalogue. The process was informed in part conceptually by guidelines for developing culturally inclusive approaches (Gunawardena, 2020) and ideas about “future-proofing” (Naidu and Roberts, 2018; Naidu, 2019) as well as practically by a recognition of the need for partnerships (Perris and McGreal, 2021) and COL’s *Handbook on Procurement: Policies and Procedures for Contracts and Agreements* which is an *Annex to its Finance & Accounting Policies and Procedures*.

Methods

A five-step methodology was employed:

1. Concept development and course mapping
2. Development of a prototype
3. Review of the prototype
4. Request for proposals
5. Iterative development, deployment and improvement.

Concept development and course mapping

In step 1, a consultant based in the region was commissioned to design a survey instrument as a first step towards a process of mapping existing ODFL training courses suitable for teachers in the Pacific region by levels, duration, focus and mode.

The consultant was requested to:

- develop a conceptual framework for the survey instrument;
- develop the survey questions and test them for validity and reliability;
- test the instrument once captured in Lime Survey;
- make any revisions that may be required.

The survey instrument was sent to key contacts in the region. Although the survey did not yield the depth of insights we had hoped for, the work on the conceptual framework was very useful in preparation for Step 2.

Development of a prototype

Having developed a conceptual framework and gained some insight into its utility, we sought a service provider to develop a prototype. This was done based on expediency – we wanted to use a service provider already working in the region and preferably familiar with the institution we thought would likely be the long-term host of the ODL course catalogue. So, we approached an existing service provider to assist with the development of a prototype. The scope of work agreed was as follows:

1.1. The Consultant shall be responsible to:

- 1.1.1. develop a base app with front end and back end layer integrated with JWT secure tokens with service calls;
- 1.1.2. specific security authorisation roles – COL Admin, Institutional Admin;
- 1.1.3. develop a login page and services;
- 1.1.4. develop user management screens and services;
- 1.1.5. create a screen to upload course catalogue files and edit results;
- 1.1.6. develop services to import course catalogue files and edit results;
- 1.1.7. develop a screen and services to add/edit courses;
- 1.1.8. develop a screen for course survey;
- 1.1.9. develop a home page with course catalogue and search function;
- 1.1.10. develop a search catalogue service;
- 1.1.11. develop a search page results screen;
- 1.1.12. develop a screen to enter OERs against a catalogued course (e.g. an example course unit or course brochure);
- 1.1.13. develop function to download data as Excel spreadsheet;
- 1.1.14. develop an audit log;
- 1.1.15. undertake appropriate UI/UX design;
- 1.1.16. implement UI/UX design;
- 1.1.17. provide UAT support;
- 1.1.18. develop AWS infrastructure DevOps CICD Server and Pipeline;
- 1.1.19. develop AWS infrastructure DevOps Infra as Code; and
- 1.1.20. develop infrastructure DevOps Logging, Monitoring and Alerting with ELK
- 1.1.21. provide ongoing support for the platform for up to a further eight months while it is being tested and refined and then provide support options for a Pacific Island Country Ministry or Institution to maintain the course catalogue thereafter.

As noted above, a prototype was developed as the basis for seeking feedback from potential users on the content and functionality they would like to see in such a tool.

The prototype repository can be viewed at:

<https://www.ppodl.org>

Review of the prototype

Having developed a prototype, the next step was to review it. A three-way review was undertaken:

- The first review was by an individual expert based in the region who focused on the design and potential utility of the course catalogue for the Pacific region and was also informed by the questions contained in the invitation distributed by COL to offer formative feedback (see Appendix A).
- The second review involved an attempt to get feedback from teachers in the region through an online survey and three virtual workshops (to address both cultural and time zone differences). There were 90 responses to the survey which was promoted across all nine Commonwealth Pacific Island Countries. The

survey sought insight into the challenges which teachers had faced in accessing and using technology to support continuity of learning and hence the training and support needs that has surfaced. The three virtual workshops then addressed the questions set out in Appendix B.

- The third review involved an attempt to get feedback from university teachers employed across the ten campuses of the University of the South Pacific. The online survey was distributed to 381 teaching staff, from which 188 responded. The survey was circulated across all the regional campuses and over 49% of the respondents participated in the survey. Of the 49%, 84% of the respondents were from the Laucala campus, while the rest were from the other campuses. Like the previous review, analysis of the survey results was followed by three online discussions.

Request for proposals

Feedback from the three reviews was then compiled into a single document which was used to develop a request for proposals. The request for proposals can be summarised as follows:

COL seeks a contractor, preferably based in the Pacific region or at least with extensive experience of working in the Pacific, to upgrade or redesign the prototype repository based on the initial three-way review and regional consultancy process as well as ongoing feedback from users and then to host and maintain the repository.

What really matters

The searchable online course catalogue must:

Key requirements	Details
<ul style="list-style-type: none"> • Reflect the Pacific Region 	For example, all images should reflect the diversity of cultures in the Pacific region.
<ul style="list-style-type: none"> • Be informed by Pacific and Educational values and pedagogy 	For example, the course catalogue should reflect courses that meet the needs expressed by teachers in the Pacific region.
<ul style="list-style-type: none"> • Acknowledge both similarities and differences between Pacific countries 	For example, the course catalogue might contain courses that are available only nationally as well as those available regionally.
<ul style="list-style-type: none"> • Acknowledge the bandwidth and connectivity challenges existing in many parts of the Pacific 	For example, avoid use of high resolution or long video content.
<ul style="list-style-type: none"> • Provide alternative ways for teachers to find available courses that will address their professional development needs in a quick and efficient way 	For example, search by course type, duration, level, free or fee-paying, etc.
<ul style="list-style-type: none"> • Provide information and links to courses that teachers may find useful in at least the following areas and dimensions (and taking cognizance of feedback from users): 	<ul style="list-style-type: none"> ○ Post-graduate higher education, Under-graduate higher education, TVET teaching, Secondary School Teaching, Primary School Teaching, Non-formal education teaching, ECD/ECCE, Physical Education, Inclusive/Special Education. ○ Both courses that are about an aspect of ODL e.g. <i>An introduction to blended learning</i> and courses for teaches that use ODL methods e.g. <i>A Post-Graduate Certificate in Primary Mathematics Teaching</i> offered online ○ Duration (months) ○ Workload (hours per week)

Key requirements	Details
	<ul style="list-style-type: none"> ○ Free or fee-paying ○ Fully online or not ○ Course description ○ Link to source
<ul style="list-style-type: none"> ● Institution offering course and link to site/course catalogue for further information. 	

Target audience

The priority audience for the searchable online catalogue of ODL courses is:

- Teachers at all levels of the education system
- Teacher-trainers
- Education Ministry teacher education professional development departments.

There are three parts to the work to be done as indicated in the table below. Submissions should indicate the proposed budget allocation for these three components. COL reserves the right to award different components of the work to different providers.

Deliverables and budget

Deliverables
<ol style="list-style-type: none"> 1. A project plan outlining the proposed approach to design/re-design, ongoing development, hosting and maintenance of the course catalogue. This must include: <ol style="list-style-type: none"> a. underpinning values and principles to guide the design, ongoing development and maintenance of the online course catalogue b. a process for gathering input and feedback from Pacific users throughout the project c. a process for working with COL team members d. a clear plan for the development and implementation of the online course catalogue, including: <ol style="list-style-type: none"> i. identifying what is in and out of scope ii. identifying how the course catalogue will be designed/re-designed to acknowledge what matters most iii. identifying already existing ODL courses which can be uploaded to the course catalogue iv. identifying gaps in course information available based on searches which do not yield results v. design mock-ups of what the revised/new course catalogue will look like vi. identifying how the online course catalogue will be continually user-tested vii. how the number of visitors to the course catalogue and the number of distinct users of the course catalogue will be tracked. viii. a detailed budget identifying how funding will be allocated.

Deliverables
2. An upgraded or new version of the searchable online course catalogue which clearly demonstrates learning from the three-way and ongoing review processes
3. Ongoing hosting and maintenance of the course catalogue from November 2021 to November 2022

Criteria for evaluating proposals

Proposals must include a completed application form and a separate Budget document detailing elements of expenditure and value for money approach. Proposals will be evaluated against the following criteria, using the weightings noted where the Budget information will be evaluated against the ‘Value for money’ criteria below.

Criteria	Weighting
<p>1. Experience Experience developing online solutions and working in the Pacific, and in the university/teacher education sector.</p> <p><i>COL is seeking organisations, companies, or collaborative groups (Proponents) who have:</i></p> <ul style="list-style-type: none"> • <i>Designed and implemented online solutions for a range of clients</i> • <i>Used design-led or co-design processes to develop online solutions that meet user needs</i> • <i>Developed solutions that take account of technical and budgetary constraints of user groups</i> • <i>Worked with people from a range of Pacific countries</i> • <i>Experience working in the Higher Education/Teacher Education sector;</i> • <i>Customised existing user interfaces for Pacific contexts.</i> 	40%
<p>2. Values and principles The high-level approach to the project shows a clear understanding of the importance of user-led design and reflects Pacific and teacher professional development values and principles.</p> <p><i>COL is looking for Service Providers with the capacity to:</i></p> <ul style="list-style-type: none"> • <i>Describe (at a high-level) an appropriate approach to the project.</i> • <i>Clearly articulate the values and principles they will use to guide the development of the ODL Course Catalogue and describe how they will apply those through the project.</i> • <i>Clearly articulate appropriate ways of working with a wide range of stakeholders (COL and potential users).</i> 	35%
<p>3. Risk identification and mitigation strategies Clear strategies for identifying and mitigating risks to the project must be identified.</p> <p><i>Proponents must outline that they:</i></p> <ul style="list-style-type: none"> • <i>Have clear processes for identifying and mitigating risks.</i> • <i>Can establish and maintain effective communication processes.</i> • <i>Can work within tight timeframes to produce quality, fit-for-purpose products in a responsive way over an extended period.</i> 	10%

<p>4. Value for money Ways of ensuring value for money while creating a quality, fit-for-purpose product, are to be identified.</p> <p><i>The Service Providers must demonstrate that they:</i></p> <ul style="list-style-type: none"> • <i>Can produce quality work within budgetary constraints.</i> • <i>Are able to understand and prioritise within a set budget.</i> • <i>Are able to work collaboratively and creatively to deliver value for money</i> • <i>Are able to find, reuse and repurpose openly licensed resources.</i> 	<p>15%</p>
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The proposals which were received were reviewed by a technical team led by COL's then Technology and Innovation initiative lead and which included representatives from Ministries and Institutions in Fiji, Papua New Guinea and Samoa. The technical team recommendations and the full proposals were then reviewed by an internal COL internal team with responsibility for the applicable workstream.

Based on this process a contract was awarded.

Iterative development, deployment and improvement

At the time of writing, the course catalogue is currently going through an iterative development, review and improvement process.

By the start of PCF10, the course catalogue should have been deployed and so a link will be provided at that time. However, for readers of this paper, a link to the ODL course catalogue will be available in due course at: <https://pacificpartnership.col.org/> so it will be possible to compare the before and after content, design and functionality of the ODL course catalogue as a result of the five-step development and review process outlined above.

Provision has, however, also been made for further modifications based on feedback from users.

Conclusion

Although this paper focused on the development of a course catalogue to help teachers in the Pacific more easily locate the training they might need in the transition from campus-based teaching to greater use of open, distance and flexible learning, perhaps of more generalisable value is the process which was followed to achieve this project deliverable. There are very useful and more detailed process guidelines available for different aspects and types of development projects, for example [GIN-McMaster](#), [WHO guideline development methods](#), [Developing Project Plans](#) and for managing projects, for example [Project Management for Development Organizations](#). However, it is felt that the five-step consultative process that was followed here could easily be adapted for use in other contexts in which it is important to be both proactive but also responsive about addressing the emerging needs of a diverse group of users. As noted by Greenfield (2018), we must be cautious about assuming there is only one right method.

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Appendix A: Key review questions

You can comment on any aspect of the prototype but we would like to draw your attention to the following. We have sought to give the Course Catalogue a Pacific Region look and feel and would welcome your feedback on how successful we have been in this regard. Teachers will be able to search the catalogue in different ways. Page 7 of 8 We have identified 6 specialist and 1 general way of browsing all courses available. Clicking on different icons will yield different results, although some courses may be applicable for more than one category. Have we chosen appropriate education categories? As the course catalogue fills up with more courses, teachers might wish to be more selective about what they are looking for. ● By clicking the magnifying glass icon at right, they can search using their own key words. ● By clicking the filter icon at right, they can filter by some pre-determined filter options: ○ Is the course fully online? (if it is not, it must have some component of campus- or work-place-based learning) ○ Duration (Months) ○ Level (beginner, intermediate, advanced) ○ Free or fee-paying ○ Weekly workload

(hours) ○ Certificate of Completion (yes/no). Are these appropriate filters? You might also like to explore the repository on a range of devices e.g. laptop, tablet, mobile phone to compare functionality.

Appendix B: Key discussion questions for teachers

- What challenges have you faced with the move to remote and online teaching?
- What training do you see the need for and where do you currently find training courses?
- How useful is the prototype course catalogue in terms of:
 - Overall appearance?
 - Selection of educational areas?
 - Information provided on courses?
 - Ease of searching by:
 - Educational area
 - Using the search function (magnifying glass icon)
 - Using the filter function (funnel icon)
- What would you like to see more of? Less of?