Models/Concepts/Proposals

Concept of Online Curriculum Development and Accreditation Support System to Enhance Programme Recognition to Promote Student Mobility and Employability: A Component of the Erasmus+ Co-Funded Project FOUNTAIN

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Abstract

Access to cross-border education has shown a continued increase over the last two decades. The expansion of online teaching and learning has played a role in enabling increased student mobility resulting in potential widening of employability. Accreditation plays a pivotal role in recognizing degree programmes to support student mobility. Sri Lanka's higher education system is also attempting to enhance student mobility while challenged by the accreditation process. The accreditation process emphasizes the visibility of teaching and learning structures and adherence to set standards. This article presents the concept of online curriculum development and accreditation support system proposed as part of the Erasmus+ co-funded project FOUNTAIN aiming at standardizing curriculum development and facilitating controlled visibility of study programmes. The proposed system can be expanded to be deployed at the country level after testing and reviewing.

Keywords: *Credit Transfer, Curriculum Revision, Curriculum Visibility, Programme Review, Quality Assurance*

Introduction

Recent Changes in the Global Education Paradigm

Last two decades has shown a continued increase of access to cross-border education.. Widened access to information and Information Technology (IT) infrastructure facilities can be pointed out as driving forces (Marginson, 2022). Highly interactive online communication platforms had a boost during the COVID-19 pandemic, which closed the gates and doors of most parts of the world (Rosak-Szyrocka et al., 2022). Moreover, online education services have progressed to a stage where they present a significant competition to the traditional in-person teaching and learning environments. As a result, well-established education systems still catering to a substantial share of the global populace, need to prepare for new and unanticipated challenges. The expansion of online teaching and learning has

played a role in enabling increased student mobility (Liu & Gao, 2022), potentially correlating with enhancements in student employability.

Need for Degree Programme Recognition in Sri Lanka

The University Grants Commission (UGC) of Sri Lanka attempts to clarify the recognition of prior learning, credit transfer, and lateral entry through its circular number 05/2021 (UGC, 2021) issued in a time when the state university system in Sri Lanka was facing challenges in integrating cross-boundary teaching and learning. One of the primary reasons for this struggle is the lack of global or national recognition of many degree programmes, despite their acceptable quality. Accreditation plays a pivotal role in acknowledging the value of degree programmes. However, certain fields lack established accreditation services, and the high cost associated with accreditation is often prohibitive for some higher education institutions in developing nations to go through the process. The accreditation process emphasizes the visibility of teaching and learning structures and adherence to set standards. By enhancing visibility and adherence to set standards, universities can effectively demonstrate the quality of their education and attain recognition. Furthermore, increased visibility of curricula aids in more efficient programme evaluations (Eaton, 2015).

Enhancing the Visibility of Curricula for Programme Recognition

Making the curricula visible to stakeholders is the starting point in programme recognition. Therefore, having systematically developed curricula in a standard format is important for information retrieval, comparisons, and verifications. Although there is consensus among academics in Sri Lankan Universities about the preparation of curriculum blueprints as guided by the Quality Assurance Council (QAC), UGC of Sri Lanka, there is no standard format for curricular blueprints.

Overview of the Proposed Online Platform

The Erasmus+ co-funded project FOUNTAIN (Fostering sustainable university-industry techno entrepreneurial collaborations and innovations in Asian universities) of the Faculty of Agriculture, University of Ruhuna attempts to develop a comprehensive framework for University-Industry collaborations. Development of a course focusing on internships is one of the main activities of the project. The proposed platform will be developed primarily for this activity. It is expected to augment the visibility of curricula to industry to enhance the employability of the students. The proposed system primarily functions as an online platform to help systematically develop curricula in a uniform or standard format. Integrated functions then allow the universities to open their curricula with the desired level of visibility to stakeholders for a multitude of purposes such as accreditation, programme

review, credit transfer, course exemptions, compliance checking for employment, and support receiving industry feedback on industry requirements.

Objectives

To propose a concept of an online system that will be established to help systematically develop new curricula and revise existing curricula in an interactive online environment and enable controlled access to details of the degree programmes to enhance visibility.

Methodology

The system will be developed as a cloud-based interactive and user-friendly application that can be accessed from anywhere at any time without installing any software. Initially, it will be hosted on high-end local servers of the Faculty of Agriculture, University of Ruhuna. Facilities will be incorporated to manage the visibility and protect the content from unauthorized access and infringement of copyrights (Table 1 and Table 2). The level of visibility can be set depending on the purpose and requests that can be allowed by the appropriate authority.

The curriculum development environment is explained in Table 3 to Table 6. During the curriculum development, the system allows the collective design of blueprints with built-in functions to map and align the contents to Subject Benchmark Statements (SBS), Programme Learning Outcomes (PLOs), Intended Learning Outcomes (ILOs), etc. The courses offered by other universities also can be integrated with permission from respective course developers to support credit transfers. The system also possesses a facility to document the development process, store records, and collect feedback (Table 7). The system also contains dashboards at varying levels to display real-time information about curricula (Table 8) and a report generation system (Table 9).

The model will be tested by building an internship curriculum under the FOUNTAIN project through the collaboration of consortium members. The system will be introduced to the Center for Quality Assurance (CQA) of the University of Ruhuna and the QAC of the UGC to consider establishing it as a country-level platform that could support curricula visibility and verification needs.

Table 1: Creating Profiles and Assigning Authorities in the System

	Profile Level		Authorities/ Controlling entities
Create Profiles	QAC or equivalent body		Chairman/ Committee ...
	University		CQA
	Faculty		Internal Quality Assurance Cell (IQAC)/ Curriculum Development Committee (CDC)/ Academic Committee (AC)
		Degree Programmes (Undergraduate/ Postgraduate)	
		Diplomas and Higher Diplomas	

Table 2: Defining and Assigning Roles in the System

		Types	Authority	Enrollment
Roles	**Admin**	System Admin	Hosting service admin	Ex-officio
		University Admin	Director CQA	Ex-officio
		Faculty Admin	IQAC/CDC	Ex-officio
		QAC	Chair/Designated officer	Ex-officio
	Users	Development Supervisors	Head of the Department (HoD)/ Dean/ CDC	Manual - CDC
		Course module developers	Academic/ Support Staff	Manual - CDC
		Data entry operators	Temporary staff/ Work Aids (WA)/ Management Assistants (MA)	Manual - CMD
	Viewers	Reviewers		Manual - QAC/ CQA
		Accreditation Services		Manual - QAC/ CQA
		Other Universities		Manual - CQA
		Verification services		Manual - QAC/ CQA
		Industries		Manual - CQA/ IQAC

Table 3: Defining the Standard Curriculum Development Environment.

	Components	Component administrators
Curriculum development support services and components	Subject Benchmark Statements	QAC/CQA/IQAC
	Define the QA framework (guidelines/PLOs/ level descriptors...)	QAC/ Collaborating foreign QA body

Table 4: Defining Curriculum Components and Feeding Data

	Components of the curriculum	**Authority**
Curriculum development components	Define Graduate Profile	IQAC/ CDC
	PLOs/ Industry requirements/	IQAC/ CDC
	Automatic/ Manual course codes	Course Module Developers (CMD)/ CDC/ IQAC
	Course titles	CMD
	Course descriptions	CMD
	Credit count	CMD
	Intended Learning Outcomes (ILO)	CMD
	Lessons	CMD
	Topics	CMD
	Assessment criteria	CMD
	References	CMD

Table 5: Curriculum Mapping Facilities and Functions

	Function	**Supporting functions**	**Authority**
Curriculum mapping tools	Map lessons/ topics to ILOs		By CMDs - Manual
	Map ILOs to Programme Learning Outcomes (PLO)		By CMDs - Manual
	Map PLOs to Graduate profile		By CMDs - Manual
	Map the related courses/ contents	Prerequisites/ overlaps/ ... (Semi-automatic)	By CMDs - Manual
	Add courses from other degree programmes	Functions to request courses from the other universities available on the platform	CDC/ HoD/ CMD - Manual

Table 6: Defining Assessments

	Defining assessment process	**Setting compliance with**	
Planning Assessments	Formative/ Summative	ILOs	CMDs - Manual
	Defining proportions	ILOs/ Bylaws …	CMDs - Manual
	Defining types of assessments	ILOs/ Bylaws …	CMDs - Manual
	Sample papers/ marking schemes		CMDs - Manual

Table 7: Facilities to Upload Curriculum Development Support documents for record-keeping and transparency.

Uploading supporting documents and information	Student handbooks/ prospectus	
	Student support services	
	Teaching and learning facilities	
	Reports of stakeholder meetings	
	Student feedback	Feedback forms
	Industry feedback	Feedback forms
	Reviewer feedback	Feedback forms
	Bylaws	
	Application forms	
	Minutes of CDC/IQAC/ CQA/ Senate/ Council	
	Evidence of approval process	
	Photos or videos of T & L activities	
	Student Statistics	Z - score, enrollment, dropout, and employability survey and statistics

Table 8: System Dashboard and Type of Information Displayed

	User level	Information to display	Detailed information	Information generation
Dashboard (Programme level)	**For programme developers**	Level of Completion/ Progress	Programme development	Automatic
			Programme approval	
			Programme execution	
		Status of compliance with QF/SBS/ PLOs ...		Automatic
		Conflicts		Automatic
		Overlaps		Automatic
		Weaknesses		Automatic
		Usage statistics		Automatic
		Countdown		Automatic
		Revisions		Automatic/ Manual
	For verification requests	Compliance with the QA framework		Automatic
		Development history/ revisions		Auto/ Manual

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Table 9: Generation of Reports through the System

	Type of information	Details
Print/ generate	Course Information Sheets	
	Curriculum blueprints	
	Copyrights	
	Revisions/ history	
	Compliance verification	
	Confirmation of subject area coverage	Weightage/ time allocation/ nature of delivery ...

Discussion and Conclusions

Although this system will be developed under the FOUNTAIN project, it will be built as a full-scale system with facilities to work at the country or international level. The system in isolation will only serve as a curriculum development system. Getting recognition among the users and incorporating more curricula into the system would facilitate cross-curricula course development. After the system is developed, discussions will be held with stakeholders such as QAC, other universities, and industries to explain its applicability to cater to the country's needs and possibilities to enhance sustainability. Therefore, the adoption of the system could take a considerable amount of time. **Table 10** shows the strategies and actions that can be adopted to promote the system and maintain a sustainable operation. It is envisaged that the adoption of this system itself would bring recognition to the degree programmes when the system is established and accepted by a large community.

Table 10: Strategies to Establish the System and Ensure Sustainability.

Popularization/Improve acceptance	1. Identify as the QAC-level programme verification platform 2. Giving QAC recognition through a "QAC-certified" label/QR code 3. Giving rewards/ Points in PR and IR
Conducting Awareness sessions for	1. Foreign universities 2. Industries 3. Accreditation services 4. Diplomatic missions 5. Immigration consultants
Charging for the service	1. To maintain infrastructure and further development 2. Nominal fees from local universities 3. Subscription-based service for foreign universities

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