


Chapter 4

Curriculum Redesign for Cloud Computing to Enhance Social Justice and Intercultural Development in Higher Education

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ABSTRACT

As a result of the COVID-19 pandemic, teaching on a Cloud Computing module with more than 100 students based in different locations was moved online. In order to maintain student engagement, Cloud Computing had to be redesigned to be more adaptable for both online and in-person instruction. These changes should result in improved social justice and intercultural development. In this chapter, the authors present a case study of curriculum redesign showing how the Cloud Computing module has been updated to improve student engagement and employability while learning in multicultural environment. They have followed the professional frameworks to design intended learning outcomes associated with a usual student in terms of academic content, graduate attributes, and disciplinary skills. The teaching and learning profile has been redesigned by adapting teaching methods and resources for online and in person delivery to promote social justice and enable intercultural development. Assessment, feedback, and evaluation design were also considered as integral components of the curriculum redesign process.

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INTRODUCTION

The UK Professional Standards Framework (UKPSF) offers a platform for the practical development of teaching and learning professionals to better support students in higher education (QAA, 2018). It is helping new lecturers actively engage with academic tasks related to their teaching and assessments (Qadir, 2020). The current assessment procedure and feedback experiences help academicians for effective curriculum development to provide quality education (Brooman, 2011). The UKPSF can be used to support academics to develop their practice across the broad ‘Areas of Activity’ defined in the framework, including curriculum design (Gourdin, 2020).

The main aim of this research work is to analyse the redesign of the curriculum of Cloud Computing module at Queen Mary University of London (QMUL) to enhance social justice which teaching higher education in multicultural environment (Gill et al., 2022). The following case study of curriculum redesign was developed through a taught programme (Postgraduate Certificate in Academic Practice) which is aligned to the UKPSF and accredited by Advance Higher Education (HE). Cloud Computing is a Level 7 module at QMUL within MSc taught programmes such as Big Data Science, Artificial Intelligence, Computing and Information Systems, Internet of Things (IoT) and Computer Science. This module is one of four optional modules in the second semester of the MSc. This module is also available for part-time students in the second semester of the first/second year. Cloud Computing is worth 15 credits and builds on the multithreading programming concepts learnt in the Operating Systems and Python Programming modules. As a result of the COVID-19 pandemic, the entire module was moved online for a cohort of more than 100 students sitting in different countries. Therefore, the module was redesigned to adapt it for both online and in-person teaching with a multicultural and highly diverse cohort. The redesign further sought to enhance social justice and intercultural development in higher education. Social justice in higher education refers to a motivation to overcome social, cultural, and physical inequities placed on learners or students as a result of any uneven allocation of resources, and privilege (Parson, & Ozaki, 2020).

Motivation and Contributions

We have redesigned the curriculum for the cloud computing module to promote cross-cultural understanding among students. It is critical to take into account essential ideals of social justice, such as equality of opportunity, fairness, diversity, and participation, as well as human rights (Bull, 2008). Further, this redesign work shows how delivery of higher education can provide “practice of freedom” for students to learn to critically analyse and discover how to participate in the transformation of their worlds by promoting multiculturalism while working in group-based coursework (Naeem et al., 2022). The curriculum redesign of the cloud computing module shows the growing interest of students in assessment which is an innovative way to support more equal and rightful practices of evaluation and solves the equalities issues in assessment by incorporating the team work based group project activity (Gill et al., 2022). Every student has the option of joining a team of their own choosing in a team work activity. All students will receive equal guidance and support in order to understand this concept while working independently and in a team during the think-pair-share activity for completing the group project (Letizia, 2016). We have introduced fundamental key changes and innovations in teaching and learning, assessment or feedback and evaluation strategies during the redesign of cloud computing module to reduce the gap between traditional and non-traditional students and improve the student participation,

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