

University of New England

Efficiency and Effectiveness in the Australian Technical and Further Education System

A portfolio submitted for the degree of
Doctor of Education of the
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Certification of dissertation

I certify that the substance of this portfolio has not been submitted for any degree and is not currently submitted for any other degree or qualification. I certify that any help received in preparing this portfolio and all sources used have been acknowledged in this portfolio.



5 June 2015

Signature of candidate

Date

Abstract

The beginnings of the Australian TAFE system can be traced back to the early 19th century when the first Mechanics Institutes were established in Tasmania and New South Wales. Since then, a growing population and the increasing need for a skilled workforce have led to an expanding network of modern TAFE institutes across Australia. Constraints on the public purse, stakeholder demands for transparency and accountability and the ever increasing availability of data have in recent decades seen a growing trend for performance measurement in public institutions, including TAFE institutes.

In this study, we investigate aspects relating to the measurement of effectiveness and efficiency in the Australian TAFE system, using predominantly publicly available data. The empirical analyses are presented in a portfolio-based format composed of three separate, but interrelated papers. Our portfolio seeks to make a contribution to the development of quantitative methods in the field of vocational education research, with a strong emphasis on practical usability of such methods. In paper one, we develop a methodology that creates several effectiveness indicators using data from the Student Outcomes Survey. This methodology incorporates measures that address survey response bias and accounts for different educational, demographic, and institutional backgrounds. A typology of effectiveness and a summary indicator are produced. In paper two we examine two different concepts of institutional efficiency ('teaching load efficiency' and 'employment outcome efficiency'), using the frontier-based approaches of data envelopment analysis (DEA) and stochastic frontier analysis (SFA). The results of both methods are compared and the relationship between teaching load efficiency and employment outcome efficiency are explored. The third paper deals with course completions at the system level. Here we develop a methodology that enables us to analyse the benefit of completion to individual

students. We then apply a chi squared automated interaction detection (CHAID) approach to segment groups of students based on educational and demographic parameters. We further investigate the well-known dichotomy between VET students' intentions to complete and actual completions and establish the notion of the 'completion deficit'.

In summary, we conclude that a significant number of meaningful performance indicators can be created with publicly available data and that the robustness of these indicators allows their usage for public policy purposes such as funding decisions or intervention measures.

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