

Seeing COL's technology-enabled learning Benchmarks in the light provided by the ACODE Benchmarking process

Michael D Sankey
Griffith University, Australia

Fernando Padro
University of Southern Queensland, Australia

Keywords: Benchmarking, standards, quality, Technology enhanced learning, Framework

Abstract

Since 2014 the Australasian Council for Open Distance and eLearning (ACODE) have been holding biennial inter-institutional benchmarking summits for those higher education institutions wishing to benchmark their capacity in technology enhanced learning. Over this time the evidence has been mounting as to the longer-term benefits for many of the institutions undertaking this activity. For those who have regularly applied this tool, it can be demonstrated that there have been improvements in particular areas of their practice. In the light of this, and now that the Commonwealth of Learning have developed their own Benchmarks for technology-enabled learning, it is worth understanding how this tool can be applied by institutions, so that similar or, if one might be bold enough to suggest, better results may be afforded. This paper will compare the two tools and the methodologies adopted and provide suggestions based on the lessons learned from over 40 institutions in Australasia. It will report on the three ACODE Benchmarking activities that have occurred since 2014 in Australia and provide a longitudinal view of the key features and outcomes of these activities. In conclusion this paper will challenge institutions to take seriously their mandate to provide their students with learning environments that meet the highest possible quality, particularly now in a higher education setting that will come under increased scrutiny by regulatory bodies. More importantly, it will reflect on what the potential implications are for institutions in moderating their learning management and associated systems.

Introduction

The Australian Tertiary Education Quality and Standards Agency (TEQSA) define Benchmarking as,

A structured, collaborative learning process for comparing practices, processes or performance outcomes. Its purpose is to identify comparative strengths and weaknesses, as a basis for developing improvements in academic quality or performance. Benchmarking can also be defined as a quality process used to evaluate performance by comparing institutional practices with identified good practices across the sector (TEQSA, 2019a).

For many Higher Education Institutions (HEIs) this is seen as a journey, not a once-off activity, that starts with a self-assessment based in evidence, not opinion. Benchmarking ascertains achievements 'to-date', providing signals on how to improve one's practice in the future. McKinnon et al., (2000) believes that it generates "information needed for improvement and a realistic appreciation of how well the organisation is moving towards its goals...to demonstrate efficiency and excellence" (P. 4)

There are a number of well-rehearsed reasons why HEIs might use benchmarking as a tool to help them mediate their practice. Elmuti and Kathawala (1997) identify these as:

- Continuous improvement,
- determining areas for development or growth (gap or opportunity identification),
- developing strategy,
- enhancing organisational learning and improving organisational sense-making,
- increasing productivity or improving the design of a product or service,
- performance assessment, and
- performance improvement through recalibration or setting of goal.

Crucially, Benchmarking is not simply a matter of capturing metrics (a numbers-only exercise) as this generally does not lead to an understanding of how an institution's practise has enabled a particular outcome. Rather, it is commonly achieved by participating in a structured and documented approach to identifying practices designed to

improve one's processes and to meet institutional aims. This is particularly important when an institution wishes to compare its practices with other like-minded entities (which is where the real learning happens).

Since 2014 the Australasian Council on Open, Distance and eLearning (ACODE) have been facilitating biennial inter-institutional benchmarking summits for those higher education institutions wishing to benchmark their capacity in technology enhanced learning against a set of recognised and now well established indicators; the ACODE Benchmarks for Technology Enhanced Learning. Over the last five years, four major inter-institutional summits have been held; three in Australia and one in the UK. Over this time the evidence has been mounting as to the longer-term benefits for many of the institutions who have undertaken this activity and for those who have regularly applied this tool, with some rigour, it can now be demonstrated that there have been improvements in particular areas of their practice.

In the light of this, and now that the Commonwealth of Learning (COL) has developed their own Benchmarks for Technology-Enabled Learning (TEL), it is worth understanding how this new tool can be applied by institution, so that similar or, if one might be bold enough to suggest, better results may be afforded. As such, this paper will first provide a context for Benchmarking TEL practice at the institutional level and provide a comparison of the two benchmarking tools and the methodologies adopted. It will then provide some suggestions as to how this can be undertaken by institutions, based on the lessons learned from over 40 institutions in Australasia.

As the ACODE Benchmarking activities have been occurring on a regular basis, since 2014, it is now possible to provide a view of some key features and outcomes of these activities that may help other organisations (in this case COL) who will be undertaking similar activities. It is by institution's undertaking regular quality and benchmarking activities, such as this, that they now have access to a methodology to promote a level of design consistency that can be applied across the evolving institutional practices associated with providing technology-enabled or enhanced learning and teaching practices.

Towards the end of this paper there will be a challenge offered to institutions, to take seriously their mandate to provide their students with learning environments that meet the highest possible quality, particularly now in a higher education setting that will come under increased scrutiny by regulatory bodies. More importantly, it will reflect on what the potential implications are for institutions in moderating their learning management and associated systems.

Benchmarking in Higher Education

Benchmarking was adapted for use within a higher education context first in North America in the early 1990s, then Australia, the UK and continental Europe by about 2000 (Jackson, 2001). From this point on benchmarking has been used pretty consistently in the Australia higher education sector as a continuous improvement tool, primarily in response to the government introducing a series of quality standards (Bridgland & Goodacre, 2005). To quote Schofield (1998):

Almost all such approaches to quality management emphasise evaluation, and broadly this can only be undertaken in four main ways: against defined objectives or standards (whether set internally or by external funding bodies); against measures of customer satisfaction; against expert and professional judgement; and against comparator organisations; with analysis in all four approaches being undertaken over a defined time scale. Thus benchmarking as it has come to be defined, was an inevitable outcome of the growth of the quality movement... (p. 6)

However, benchmarking is not one common set of practices, rather Bhutta & Huq (1999, p. 257) suggest that there are many models currently in use, that include:

- *performance benchmarking* (the comparison of performance measures to determine how an organization compares to others),
- *process benchmarking* (methods and processes comparing methods and processes in an effort to improve an organization's own processes),
- *strategic benchmarking* (when changing an organization's strategic direction and the comparison with the competition is pursued in terms of strategy),
- *internal benchmarking* (comparisons made between an organization's own departments/divisions),
- *competitive benchmarking* (performed against "best" competition to compare performance and results),
- *functional benchmarking* (compare the technology/process in one's own industry or technological area to become the best in that technology/process), and
- *generic benchmarking* (comparison of processes against best process operators regardless of industry).

Across these different frameworks and models there is also a considerable variance in the numbers of steps required to undertake a benchmarking activity, from as few as 4 to as many as 33 steps. Importantly most of these models share some common features, commonly known as the PDCA cycle (Albertin et al., 2015), these include:

- *Plan* – planning of the goal and type of benchmarking,
- *Do* – gathering and processing of data,
- *Check* – comparisons and gap analysis,
- *Act* – actions for improvement.

A consideration of many of these models, from a range of well-established sources (Bhutta & Huq, 1999; Camp & De Toro, 1999; Castonguay, 2009), can further suggest a set of basic, or generic steps that when collated provide a particular view of what a benchmarking activity would include. For example:

- determining what to benchmark (aim and type);
- identifying who to benchmark with;
- forming the benchmarking team;
- identifying the benchmark partners;
- planning and conducting the investigation;
- have a full understanding of internal business processes before comparing them to external organisations;
- project future performance levels;
- collecting and analysing benchmarking information (based on determining and aggregating the data for benchmarks, criteria, guidelines or standards; level of analysis; indicators);
- communicate findings and achieve acceptance of the findings;
- refine goals and incorporate into planning process to establish functional goals reflecting potential improvement, integrating targets and strategies into business plans and operational reviews;
- developing and implementing action plans, monitoring progress and recalibrating benchmarks; and while less often pursued formally (because it may not be a purpose of the benchmarking exercise);
- determining when a position of leadership is attained by incorporating best practices within the organisation's business processes and/or benchmarking becomes a part of the organisation's ongoing standard operating practice.

In addition to the above list of Benchmarking models, provided by Bhutta & Huq (1999), one can suggest that Collaborative Benchmarking is a newer model that has subsequently emerged and would share many, if not all of the features described in the compiled list of features noted above.

Collaborative Benchmarking

Collaborative benchmarking is the structured comparison of a process or organisation with others engaged in similar activities relevant to the domain being measured. Its genesis can be traced back to the Xerox corporation and was used to support a combination of research into good practice by others, and the examination of performance within an organisation (Camp, 1989). Central to this process, or model of change, is the adoption of exemplar processes by teams of staff from one (or more organisations) learning from peers in other organisations who have implemented excellent processes in a similar context. The major benefit of this approach is the collaboration experience, that also provides a form of professional development and support to the participants.

Benchmarking has now expanded in definition to include many forms of structured comparison including those where the qualities of good performance are defined separately based on research (Brigland & Goodacre, 2005), such as is seen in the ACODE Benchmarks for Technology Enhanced Learning (Sankey et al., 2014). The ACODE Benchmarks provide a process for working collaboratively within an institution's different service groups, and with external partners focusing on specific areas of institutional technology enhanced learning capability. This process is particularly effective as a mechanism for devising options for improvement, and in building wider awareness and interest in institutional quality improvement. These benchmarks for technology enhanced learning provide a unique catalyst to help institutions to improve performance and assist them in meeting regulatory compliance obligations (Sankey & Padro, 2016) but are based in the now well-established collaborative approach (Camp, 1989).

ACODE Benchmarks for Technology Enhanced Learning

The ACODE Benchmarks were developed to assist higher education institutions in their practice of delivering a quality technology enhanced learning (TEL) experience for their students and staff. The original ACODE

benchmarks (framed for e-learning) were developed as part of an ACOE funded project in 2007. Then in 2014 the Benchmarks underwent a major review to reflect the evolving experience in the effective application of TEL and the emergence of new technologies and practices. More particularly, to ensure they are now both current and forward looking, moving from a focus on e-learning to one of technology enhanced learning. These revised benchmarks were then applied by 24 institutions in the first ACOE Inter-institutional Benchmarking Summit held in Sydney in June 2014. A point we will return to later in the paper.

Each Benchmark, of which there are eight, was designed to look at specific aspects of TEL decision-making related to governance and planning, technology and support systems for staff and students. While it was intended that the Benchmarks could be used separately – and thus are discrete – based on the overlap of some of the areas under review – some deliberate duplication of Performance Indicators (PIs) was built in. Each Benchmark is structured to include a scoping statement, good practice statement and a series PIs. More specifically, the eight benchmarks are:

1. Institution-wide policy and governance for technology enhanced learning (8 PIs);
2. Planning for institution-wide quality improvement of technology enhanced learning (5 PIs);
3. Information technology systems, services and support for technology enhanced learning (8 PIs);
4. The application of technology enhanced learning services (9 PIs);
5. Staff professional development for the effective use of technology enhanced learning (7 PIs);
6. Staff support for the use of technology enhanced learning (9 PIs);
7. Student training for the effective use of technology enhanced learning (8 PIs);
8. Student support for the use of technology enhanced learning (10 PIs).

The benchmarks have been designed to be used for continuous improvement and quality assurance purposes. As the focus on TEL is now mission critical for most higher education institutions to ensure the quality of their courses and programmes, it has also become obvious that we do not live in a vacuum and that other institutions are doing very similar things to our own institutions. Thus, the use of this benchmarking tool (or others) can provide an opportunity for improving practice by offering a better understanding of the operational systems and processes present within our own and other institutions. This process is also helpful in breaking down the beliefs that ‘we are different’, instead developing a sense that ‘we are all in this together’.

ACOE Benchmarking Summits

To help facilitate this, and as part of ACOE’s ongoing commitment to both this tool and to the Australasian HE sector more broadly, every two years ACOE runs an Inter-Institutional Benchmarking Summit. The first of these was held in 2014 in Sydney, Australia, where 24 institutions from 5 countries (Australia, New Zealand, the Pacific, South Africa and the United Kingdom) participated. The second was held two years later in Canberra, Australia, where 27 institutions attended from the same 5 countries as 2014. In 2017 ACOE were asked to co-facilitate an out of session summit hosted by the Open University in the UK, where 17 UK HEIs participated. Then last year (2018) the fourth activity was held in Brisbane, which in this case was restricted to only Australasian countries, where again there were 24 institutions attending.

To contribute to these Summits the participating institutions have to first undertake an internal activity within their institutions, using either all or some of the benchmarks (they have to do a minimum of two). For many this is an iterative process, with some institutions adopting a longer-term view of benchmarking, doing a few benchmarks each time, with the view that they will eventually cover all eight (this can be seen in Table 1). While others have undertaken all eight each time. The most important thing being that they are actively pursuing a quality agenda at a pace that works for their own institution.

When the institutions eventually come together, they share the outcomes of their self-assessment through a series of richly collaborative workshops that explore their individual capabilities across the ACOE Benchmarks and, more explicitly the Performance Indicators, working to identify shared issues, potential solutions and opportunities for ongoing improvements in the use of technology to enhance student outcomes and organisational systems.

By way of example, the following table illustrates the number of institutions (42) that have undertaken the benchmarking activity and participated in the Australasian Benchmarking Summits since 2014. The table shows across the top, the eight Benchmarks (1-8) and indicates against each institution which benchmarks they undertook in which years (1 = 2014, 2 = 2016, 3 = 2018), noting that some have done multiple benchmarks in multiple years. Across the bottom of the table is seen the total numbers of benchmarks undertaken each year by the institutions and the total overall across the three iterations.

Table 1. Participants in ACOE Benchmarking Summits and the Benchmarks completed

Institution	BM 1	BM 2	BM 3	BM 4	BM 5	BM 6	BM 7	BM 8
Asia Pacific International College				1			1	
Auckland University of Technology						1		1
Australian Catholic University	2	1 2			1 2	1 2		
ACER Institute			3	3				
Australian National University	2 3			2 3	3	3		
Central Queensland University			3		3			
Charles Stuart University	3	3	2	2			2	
Christchurch Polytechnic	1			1				
Curtin University	3	1 3	3		1	3		
Edith Cowen University	2 3	2 3	2	2	2	2	2	2
Federation University	1				1 2	1 2	2	1 2
Flinders University		1		1				
Griffith University					3	3		
La Trobe University	2		2	2				
Lincoln University	2 3	1 2 3	2	1 2				
Macquarie University	2 3		1	2 3	1 2 3			
Monash College	2 3	2 3	2 3	2 3	2 3	2 3	3	3
Murdoch University	3	3			3			
Queensland University of Technology	1				1			
RMIT University	3	3	3	3	2 3	2 3	3	2 3
Swinburne University	3				2 3	2 3		
The Open University	1	1	1 2	1 2				
University of Adelaide	3	3	3					
University of Auckland		2 3	1	2 3	2 3			
University of Canberra	1 2	2				1	2	2
University of Melbourne	3				2 3	2 3		
University of New England	1		2 3	2 3	1 2 3	2 3	1 3	1 3
University of Notre Dame				2	2			
University of Otago	1 2	1 2	1 2	1 2	1 2	2 3	2	2 3
University of Queensland			3			3		
University of South Africa	1 2		1 2		1 2			
University of Southern Queensland	2	2 3	2	2	1 2 3	1 2	1	1 3
University of Sydney		3			3			
University of Tasmania	2 3	3	2 3	3	3	3	3	2
University of Technology, Sydney		1		1	2	2		
University of the South Pacific	3	3	1	1	2	2		
University of the Sunshine Coast		2	2		2			
University of Western Australia			1		1			
University of Wollongong					1	1	1	1
Victoria University	1	2		2	2	1		
Victoria University of Wellington	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
Western Sydney University	1		2	1 2		1		2
2014	11	8	8	10	12	9	5	6
2016	12	11	14	16	19	13	6	8
2018	15	14	10	9	15	12	5	6
Total	38	33	32	35	46	34	16	20

From the 2018 evaluation data, which has been consistently improving after each iteration of the benchmarking summits, when participants were asked if “there is sufficient scope within the current suite of performance indicators in the benchmarks to cover the TEL scenarios at my institution?” (Question 13) 97.5% of participants agreed, or strongly agreed with this. This represented an increase from 2016 (91.5%) and 2014 (91%).

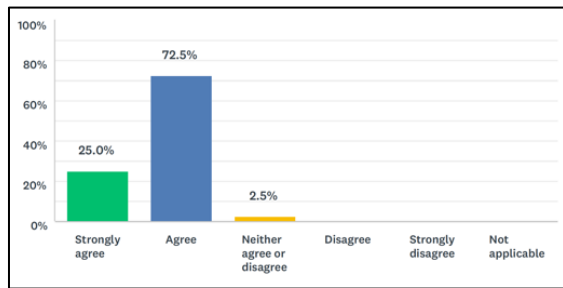


Figure 1. Question 13

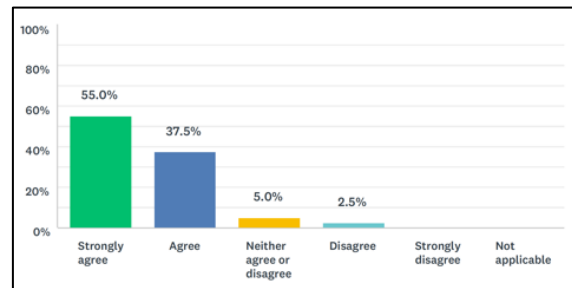


Figure 2. Question 25

When asked if “The ACODE Benchmarks made me think twice about what we as an institution are doing in relation to TEL” (Question 25), there was a 92.5% agreeing or strongly agreeing with this premise. To the extent that the benchmarks are designed to help institutions critically self-assess their capacity in TEL then this response clearly demonstrates that this is precisely what they are doing.

Finally, when asked in Question 30 if, “This benchmarking self-assessment activity has provided an opportunity to stimulate a more in-depth discussion about TEL at institution”. 90.0% agree or strongly agreed that this has provided opportunity for more in-depth discussion within their institutions.

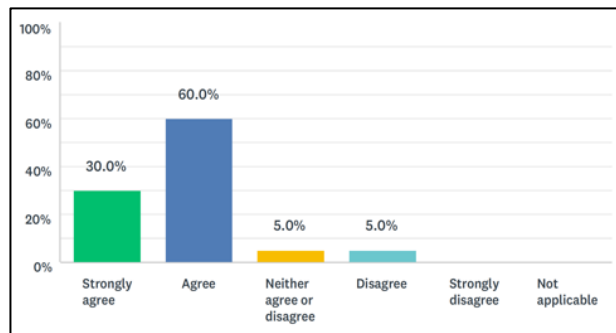


Figure 3. Question 30.

Having made the case for the successful deployment of the ACODE benchmarking tool and the formal application of this through a structured set of activities, attention should now turn to the new Benchmarking tool that has been developed for the Commonwealth of Learning (COL).

The new COL Benchmarks

This COL Benchmarking Toolkit has been designed to help institutions see their technology-enabled learning (TEL) practice in the light of what is considered good practice, and then compare their analysis with others who have done the same. Similar to the ACODE model, the COL tool is designed to take advantage of a style of quality assurance practice that can help bring an institution to a richer experience in using technology to ‘enable’ student learning. Notice here a distinction between technology enhanced learning (as used by ACODE) and technology-enabled learning. The main difference lies in the need to build digital capability. The following table seeks to illustrate this.

Table 2. Technology enhanced learning vs. technology-enabled learning

Technology-enabled learning	Technology Enhanced learning
The application of some form of digital technology to teaching and/or learning in an educational context...It is sufficient to consider that there is an intention for learning to result from the human-technology interaction...remembering that people have been employing various (non-book) technologies for educational purposes over many decades (Kirkwood & Price 2016).	Any learning that occurs through the application of electronic communications and computer-based technology, combined with pedagogical principles and practices that are applicable to and tailored for this purpose (TEQSA 2019b)
The use of advanced electronic technologies for purposes of direct support and enhancement of the	The use of technology to maximise the student learning experience...Technology enhanced learning (TEL) is often used as a synonym for e-learning but can also be used to refer to technology enhanced classrooms and learning with technology, rather than

student learning experience, in all of its aspects and wherever it might occur (Rogers., et.al. 2009)	just through technology (AdvanceHE 2018 – formally the HEA).
---	--

Differences withstanding, the toolkit is designed to be an extension of (augment) the framework for TEL implementation Handbook promoted by COL (Kirkwood & Price. 2016). This initiative focuses on increasing access to quality teaching and learning by supporting policy formulation and innovation in the application of ICT in education, and through the development of ICT skills.

In this COL toolkit there are ten benchmarking domains that are designed to ensure that a base level of quality practices is present in the application of technology-enabled learning at the institutional level. However, these domains are indicative and built on the premise that each institution is on a journey towards quality practice and that individual institutions are at different stages along this journey.

Each of the benchmarking domains has a number of Performance Indicators (PIs) within them (between 4-6). Inherent within the PIs is the understanding that an institution may score well in one, but may not in another, but that this information is then used as a stimulus to improve in certain areas. The current suite of Benchmarking Domains include:

- | | |
|------------------------------------|---|
| 1. Policy (4 PIs) | 6. Documentation (4 PIs) |
| 2. Strategic Plan (4 PIs) | 7. Organisational Culture (4 PIs) |
| 3. IT Support (6 PIs) | 8. Leadership (4 PIs) |
| 4. Technology Applications (4 PIs) | 9. Human Resource Training (6 PIs) |
| 5. Content Development (4 PIs) | 10. Technology-enabled learning (TEL) Champions (4 PIs) |

These domains can be undertaken in their entirety, or used selectively, depending on the need of an institution (e.g. an institution may choose to use only Domain 1, 3, 5 and 10, another combination, or all of them). Bearing in mind that if an institution wishes to benchmark with another institution then there would need to be a level of commonality in which domains were chosen.

It is envisaged that over time, as the COL Benchmarking Toolkit can be used by institutions both for internal benchmarking and later for inter-institutional activities, eventually there may well be a similar story of institutional connectedness that can emerge, as is seen in the case of the ACODE Benchmarking Summits.

The challenge

Importantly, whichever tool is adopted, the reality remains that many universities and private providers are shifting their programs online, and the role of maintaining a consistent level of quality in the provision of these programs will not escaped the gaze of the national higher education regulators. Importantly, particularly in the Australasian context, is that in the future higher education providers will need to be able to demonstrate how their online provision is equivalent to what they might provide in their more traditional modes of delivery, and/or demonstrate how their online degrees stack up against other providers offering the same online degree.

So, it is by institutions undertaking regular quality-assurance activities such as the example of ACODE, or by enacting the new COL model, that institutions now have access to a methodology to help facilitate a level of design and support consistency, across many of the evolving institutional practices associated with TEL. For those involved, the methodology has also spawned a heightened willingness to share information across the higher education sector more broadly, particularly as relates to providing a range of quality services to students and staff within their institutions. To a great extent, it is the methodology that is the big story here, as it could quite easily be applied across other contexts within Higher Education.

Conclusion

As institutions many of the issues we face in relation to the use of technology to enable learning can be remediated by making time to self-assess against a set of quality indicators. An example of these are the newly formed COL Benchmarks for technology-enabled learning (TEL). Internal political considerations and diverse organisational contexts challenge us all, particularly in how our institutions perform sensemaking through benchmarking aspects of their practice. This sensemaking, in the context of TEL, comes by extending the self-assessment processes we undertake (using a particular quality tool), by then sharing our practice with those in similar circumstances. This has been shown, in other benchmarking models to result in enhanced levels of quality practice, particularly in relation to TEL.

As COL seeks to continue to play a leadership role in this important space, it has developed a new TEL Benchmarking Toolkit that institutions can adopt to help them make sense of their practice. Like similar tools of this calibre, promoting and expanding the benchmarking process will help ensure our institutions see sufficient value in embracing TEL with more confidence. Together, as we put tools such as the COL toolkit into practice by undertaking regular quality and benchmarking activities, we can have confidence that we have access to a methodology that can support the evolving institutional practices associated with providing quality technology-enabled learning and teaching.

References

- AdvanceHE. 2018. *Technology Enhanced Learning*. Available at: <https://www.heacademy.ac.uk/individuals/strategic-priorities/technology-enhanced-learning>
- Albertin, M.R., Pontes, H.L.J., Frota, E.R., & Assunção, M.B. (2015). Flexible benchmarking: a new reference model. *Benchmarking: An International Journal*, 22(5), 920 – 944.
- Bridgland, A., & Goodacre, C. 2005. Benchmarking in higher education: a framework for benchmarking quality improvement purposes. In *Proceedings, Educause Australasia*, 5-8 April, Auckland, New Zealand.
- Bhutta, K.S., & Huq, F. 1999. Benchmarking best practices: an integrated approach. *Benchmarking: An International Journal*, 6(3), 254-68.
- Camp, R.C. 1989. *Benchmarking: The Search for Industry Best Practices That Lead to Superior Performance*. Milwaukee, Wisconsin, USA: ASQC Quality Press.
- Camp, R.C., & De Toro, I.J. 1999. Benchmarking. In Juran, J.M., Godfrey, A.B., Hoogstoel, R.E., & Schilling, E.G. (Eds.), *Juran's Quality Handbook*, 4.1-4.29. (5th ed.). (pp. 12.1-12.20). New York: McGraw-Hill.
- Castonguay, J. (2009). *Benchmarking carrots and sticks: Developing a model for the evaluation of work-based employment programs*. Amsterdam: Amsterdam University Press.
- Elmuti, D., & Kathawala, Y. 1997. An overview of benchmarking process: a tool for continuous improvement and competitive advantage. *Benchmarking for Quality Management & Technology*, 4(4), 229-243.
- Jackson, N. 2001. Benchmarking in UK HE: an overview. *Quality Assurance in Education*, 9(4), 218 – 235.
- Kirkwood, A., & Price, L. 2016. *Technology-Enabled Learning Implementation Handbook*. Commonwealth of Learning. Burnaby, British Columbia.
- McKinnon, K.R., Walker, S.H., & Davis, D. 2000. *Benchmarking: A manual for Australian universities*. Canberra: Department of Education, Training and Youth Affairs.
- Rogers, P., Berg, G., Boettcher, J., Howard, C., Justice, L., & Schenk, K. 2009. *Encyclopedia of Distance Learning, Second Edition*. IGI Global. Hershey • New York. DOI: 10.4018/978-1-60566-198-8
- Sankey, M., Carter, H., Marshall, S., Obexer, R., Russell, C. and Lawson, R. 2014. *ACODE Benchmarks for Technology Enhanced Learning*. Australasian Council on Open, Distance and eLearning (ACODE), Canberra, Australia. Available from <http://www.acode.edu.au/mod/resource/view.php?id=216>
- Sankey, M. and Padró, F.F. 2016. ACODE Benchmarks for technology enhanced learning (TEL) Findings from a 24 university benchmarking exercise regarding the benchmarks' fitness for purpose. *International Journal of Quality and Service Sciences*. 8(3), pp. 345-362. <http://dx.doi.org/10.1108/IJQSS-04-2016-0033>
- TEQSA 2019a *Guidance Note: External Referencing (including Benchmarking)*. Version 2.5. 16 April 2019. Available from: <https://www.teqsa.gov.au/latest-news/publications/guidance-note-external-referencing-including-benchmarking>
- TEQSA 2019b *Guidance Note: Technology-Enhanced Learning*. Version 1.2. 11 April 2019 Available from: <https://www.teqsa.gov.au/latest-news/publications/guidance-note-technology-enhanced-learning>