

# **ACODE Benchmarks for Technology Enhanced Learning (TEL): Findings from a 24 university benchmarking exercise regarding the benchmarks' fitness for purpose and capacity to generate useful quality assurance information**

Michael Sankey  
*University of Southern Queensland*

Fernando F. Padró  
*University of Southern Queensland*

## *Abstract*

*Purpose:* This discussion presents findings from 24 higher education institutions (HEIs), recommendations regarding the benchmarks themselves and for university practice, potential expansion of the benchmark methodology to provide more capacity to create and use data to evidence student learning in a technology enhanced learning (TEL) environment.

*Design/Methodology/Approach:* These are preliminary results of a major benchmarking activity that is designed to be part of a continuing program that is still under review. Results are provided through frequency distribution and illustrative qualitative information gleaned from two surveys provided participants, one during the collaborative session between participants from the 24 HEIs and nine months later. An analysis of the data in the form of recommendations is also provided.

*Findings:* Findings specific to participating HEIs are not shared due to confidentiality. The most important conclusion were the interest and usefulness of the benchmarks for participating HEIs, especially the sharing of information between HEIs. Findings led to 6 recommendations: [1] minor revisions to the benchmarks are needed, [2] to formally endorse the ACODE Benchmarks, [3] not pursue the merger of benchmarks 7 and 8 or 5 and 6 at this time due to insufficient evidence, [4] that ACODE agree to facilitate a formal benchmarking activity every second year, [5] create a series of online tools and a collaboration space to facilitate inter-institutional knowledge of institutional practice with a capacity to maintain confidentiality, and [6] the online collaborative space have an area to allow institutions to share good practice examples that align with the performance indicators.

*Practical implications:*

*Firstly, Australia's Tertiary Education Quality & Standards Agency (TEQSA) is expanding the use of benchmarking activities at HEIs as part of their quality assurance practice to meet regulatory compliance requirements. The use of the ACODE Benchmarks facilitates therefore assists HEIs meet their regulatory compliance obligations. Secondly,*

*Originality/value:*

*ACODE is one of the few international agencies focusing on TEL benchmarks, criteria, guidelines or standards. A number of the participating HEIs are considered leading practitioners of learning and teaching in TEL and thus they not only inform but help shape the values and inform QA agencies of appropriate practice that should be embedded within the standards and/or practices that generate recognition of HEI practice.*

*Keywords: ACODE, benchmarks, benchmarking, technology enhanced learning (TEL), TEQSA*

## **1.0 Introduction**

In 2004, the Australasian Council on Open, Distance and e-learning (ACODE) created a set of benchmarks to assist higher education institutions (HEIs) in their approach to and delivery of e-learning, later to become focused on technology enhanced learning (a.k.a. e-learning, online or flexible learning, blended model, etc. – Australasian Council on Open, Distance and e-learning [ACODE], 2014). Benchmarks were used rather than standards that can be interpreted to be prescriptive to allow for variance based on organisational contextual, policy and strategic differences. Benchmarks in technology enhanced learning (TEL) has become an important part of how many institutions are able to mediate a level of quality in their learning and teaching practice. Therefore, the approach has been to use benchmarking as a quality assurance (QA) process to evaluate performance as compared to identified sector best practice to help shore up internal HEI standards, complement or fill gaps found in other standards frameworks – in Australia's case, the Tertiary Education Quality & Standards Agency's (TEQSA) threshold standards and the Council of Australian Directors of Academic Development (CADAD).

The Benchmarks were revised in 2007. The revised benchmarks were utilised by various universities three times: 2008, 2011 and most recently 2014 when ACODE updated the benchmarks and implemented the first stage of a full-scale robust review of its 8 benchmarks to determine their continued 'fitness of purpose' and long-term viability at the institutional and, as appropriate, unit or program levels. The motivation was to test the benchmark process itself along with identifying how it was being used by different HEIs. It was deemed important to see if the benchmarks were used as part of a one-off process or if they are being used as intended, for ongoing improvement and enhancement of quality of TEL activities.

The analysis is important because during this period a number of tools and methodologies emerged to [1] review institutional-wide processes sitting in and around governance processes and support mechanisms, and [2] assess and evaluate the processes that have been established for individual courses (subjects/units) of study, to ensure alignment with things

like learning outcomes and the attainment of certain skills. Evaluation is a central characteristic of each of the benchmarks to ensure that a quality cycle is in place based on the guidelines embedded within the benchmarks (Sankey & Padró, 2013). Central to this review process was determining the viability of the ACODE benchmarking process that integrates issues of pedagogy with institutional dimensions such as planning, staff development and infrastructure provision.

This paper presents a summary of the initial results and recommendations from the benchmarking activity for HEIs utilising the benchmarks and to ACODE itself regarding the potential expansion of the benchmarks reflecting current developments in TEL techniques and data capture to enhance QA capability. The following sections present the background of the ACODE benchmarks, a discussion of the methodology, results, a discussion of the results based on recommendations emanating from the benchmarking exercise and how the ACODE process relates to typical benchmarking phases, and final conclusions.

## **2.0 Background**

### **2.1 ACODE**

ACODE is an organisation whose aegis came from the 1993 *National Conference on Open and Distance Education (NCODE)*. In 1996 the name of the organisation changed to the *National Council on Open and Distance Education* to reflect the crystalizing of its purpose and role. On expansion of membership to include universities, the name again changed in 2000 to *NCODE-Flexible Learning Australasia* and then in 2002 to the *Australasian Council on Open, Distance and E-Learning (ACODE)*. Its early mission is to provide high quality advice to major decision making bodies on the development of open and distance education and to promote excellence in open and distance education. Now-a-days ACODE sees its mission as enhancing policy and practice in Australasian higher education around technology enhanced learning and teaching at institutional, national and international levels through the dissemination and sharing of knowledge and expertise; support of professional development and networking opportunities; investigation, development and evaluation of new approaches; advising and influencing key bodies in higher education; and promotion of best practice.

### **2.2 ACODE benchmarks**

The ACODE benchmarks were the first major attempt, in an Australasian context, to bring a consistent framework to the use of e-Learning at Australian HEIs (Sankey & Padró, 2013).<sup>1</sup> ACODE recommends a three-phased approach to benchmarking. Secondly, use the audit to undertake an inter-institutional activity and thirdly, to close the loop, use the data (the understanding) generated by the inter-institutional activity to revise the initial internal assessment and potentially use this as a mechanism to inform change within the institution.

---

<sup>1</sup> Other recent institution-wide quality improvement tools or frameworks for e-learning providing similar impacts include the E-Learning Maturity Model (eMM), based on the methodology of the Capability Maturity Model and SPICE (Software Process Improvement and Capability Determination), the E-xcellence model, released by the EADTU (European Association of Distance Teaching Universities) and the Council of Regional Accrediting Commissions (C-RAC) ‘nine hallmarks of quality’ assessment framework (Sankey, 2014; Sankey & Padró, 2013).

The benchmarks cover eight topic areas, each containing a series of performance indicators (PIs) designed to be used by HEIs to gather evidence of good practice for reporting purposes (Sankey & Padró, 2015; ACODE, 2014). They include:

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**); and
8. Student support for the use of technology enhanced learning (**10 PIs**).

The format for each benchmark includes a scoping statement, a good practice statement, PIs, and performance measures (LPs) based on a 5-point scale, a place to provide a rationale and evidence to support your assessment, and an area to note an initial recommendation which may be useful for future improvement. Each benchmark is designed as a discrete element; however, there is some duplication across the topics because they can be used singly based on purpose rather than only applied as a complete set (ACODE, 2014).

### **3.0 Methodology**

#### **3.1 Regulatory compliance contextual issues**

The methodology undertaken in this study models the ACODE benchmark process itself, and reflects sector expectation surrounding benchmarking. TEQSA, Australia's higher education regulatory body, sees benchmarking as a value-added aspect of QA for universities and will be requiring evidence of universities performing benchmarking exercises (Freeman, 2014).

Agreeing with Meade (2007/1998), there is a need to begin to discuss benchmarking as a methodology with the understanding that there are variants on how benchmarking is defined based on what aspects of the process are highlighted. Overall, these suggest benchmarking is one method of establishing baseline standards (Thomas, 1995). Camp (1994 as cited in Camp and De Toro, 1999) sees it as the *'continuous process of measuring products, services, and practices against the company's toughest competitors or those companies renowned as industry leaders'* (p. 12.2). According to Meade (2007/1998), benchmarking is *'the formal and structured process of searching for those practices which lead to excellent performance, the observation and exchange of information about those practices, the adaptation of those practices to meet the needs of one's own organisation, and their implementation'* (pp. 4-5). Boxwell (1994) describes benchmarking as two things: *'setting goals by using objective, external standards and learning from others – learning how much and ... learning how'* (p. 17). Kanji and Asher (1996) see the purpose of benchmarking to *'identify and fill gaps in performance by putting in place best practice, thereby establishing superior performance'* (p. 27). Benc (2003, as cited in Bridgland & Goodacre, 2005) adds that *'[benchmarking] comprises measurement (the what) and practices (the how) ... [to] tell us how well we are performing, defines how good we need to be (a practical vision), how to get there (a roadmap) and it needs to link to our mission, vision and values'* (p. 1). Ettorchi-Tardy, Lebif,

and Michel (2012) argue that a more recent view of benchmarking provides a more focused definition based on its integration within a comprehensive and participatory policy of continuous quality improvement: *'the analysis of processes and of success factors for producing higher levels of performance'* (p. e103).

In Australia, the benefit of benchmarking to universities was laid out in a manual written by McKinnon, Walker, & Davis (2000). To them, the process identifies successes to date and also provides vital signs on how to adapt to future events, implying the use of benchmarking for risk management purposes that is now a key feature of TEQSA regulatory compliance. From benchmarking universities are able to get '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). Regulatory interest in benchmarking that began under the Australian Quality Assurance Agency (AQUA) after their Cycle 1 audits (Booth, 2012) are now taking increased impetus under TEQSA as Freeman (2014) points out.

TEQSA's approach to benchmarking clearly brings all of the aforementioned elements together, acting as a summative statement of practice. The definitions the Agency uses reflect why they want to see evidence of its use by universities as part of their QA or quality control (QC) loops. Its *Guidance Note: Benchmarking* (n.d.b) defines benchmarking in two ways: [1] a 'structured, collaborative, learning process for comparing practices, processes or performance outcomes' or [2] a quality process used to evaluate performance by comparing institutional practices to sector good practice' (p.1). These approaches are fleshed out in the TEQSA (n.d.a) glossary of terms, where benchmarking 'is recognised as a means by which an entity can: demonstrate accountability to stakeholders; improve networking and collaborative relationships; generate management information; develop an increased understanding of practice, process or performance; and garner insights into how improvements might be made.'

### ***3.2 The study***

Benchmarking is not simply a numbers-only exercise, as capturing metrics alone does not necessarily lead to understanding how the underlying processes enable results (Boxwell, 1994). It is a structured method of identifying ideas (old or new) to improve processes and meet expectations (Swift, Ross, & Omachonu, 1998). It may be implicit (the by-product of other information-gathering activities), or explicit (deliberate and structured approach), independent or collaborative, internally or externally focused, vertical (looking at work processes in a discrete functional area), or horizontal (work processes cross-cutting functional areas), and/or focused on process or the inputs into and/or outputs out of the process (Jackson & Lund, 2000).

General benchmarking exercises typically involve a 5-phase, 10-step process (Camp & De Toro, 1999). Phase 5 aside, phases 1 through 4 relate to the Shewhart/Deming PDCA cycle (Alstete, 1995). Table 1 illustrates how the ACODE Benchmark study compares in relation to the typical process identified by Camp and De Toro. The comparison shows that the study's approach meets TEQSA's definition [1], with the approach being explicit, collaborative, internally and externally focused, providing the capacity to be either vertical or horizontal (as defined by each benchmark or the number of benchmarks), and focusing on the process itself (to meet ACODE's validation needs) and the inputs driving the process and outputs derived from the process (for participating HEIs and ACODE). The discussion section below includes a discussion of how the benchmark process generated and impacted results.

Benchmark phase	Benchmark steps	ACODE Benchmark study
Phase 1: Planning	<ol style="list-style-type: none"> <li>1. Deciding what to benchmark</li> <li>2. Identify whom to benchmark</li> <li>3a. Plan the investigation and</li> <li>3b. Conduct it</li> </ol>	<ol style="list-style-type: none"> <li>1. Validation of Benchmarks themselves; identification of use of Benchmarks by HEIs and their impact</li> <li>2. HEIs using ACODE – internal, competitive and partnering benchmarking exercises (cf. Camp &amp; De Toro, 1999)</li> <li>3a. Participants had to perform an assessment of at least 2 of the benchmarks</li> <li>3b. [i] Summit where all participants shared information and worked on filling out a survey [ii] Follow-up survey</li> </ol>
Phase 2: Analysis	<ol style="list-style-type: none"> <li>4. Have a full understanding of internal business processes before comparing them to external organisations; examine the best practices of other organisations; measure the gap</li> <li>5. Project future performance levels</li> </ol>	<ol style="list-style-type: none"> <li>4. To participate, HEIs had to first undertake a rigorous self-assessment of their capacity in TEL against the embedded performance indicators (PIs) that are part of (used to validate) the Benchmarks.</li> <li>5. Completion of findings, generation of ratings and reporting on strengths and weaknesses that suggest further performance focus (at the Summit and through communication within individual HEI)</li> </ol>
Phase 3: Integration	<ol style="list-style-type: none"> <li>6. Communicate findings and achieve acceptance of findings; refine goals and incorporate into planning process</li> <li>7. Establish functional goals reflecting projected improvement, integrating targets and strategies into business plans and operational reviews</li> </ol>	<ol style="list-style-type: none"> <li>6. Overall and individual HEI reports of results provided to all participants and ACODE members</li> <li>7. Completion of the ACODE Benchmark process leads to the identification of improvements and strategies that individual HEIs can pursue; for ACODE itself, recommendations have been identified from collective feedback of participants to establish targets and strategies on future plans</li> </ol>
Phase 4: Action	<ol style="list-style-type: none"> <li>8. Develop &amp; implement action plans</li> <li>9. Monitor progress</li> <li>10. Recalibrate benchmarks</li> </ol>	<ol style="list-style-type: none"> <li>8. Predicated on internal HEI interest, QA and decisionmaking process; for ACODE action plans generated by leadership team in consultation with the membership</li> <li>9. ACODE will perform follow-up activities as part of the overall benchmark exercise to monitor HEI</li> </ol>

<b>Phase 5: Maturity</b>		<p>impact and continue validation of the Benchmarks</p> <p>10. ACODE intention is fitness of purpose to determine appropriateness of Benchmarks and their use</p>
	<p>Determining when a leadership position is attained; incorporating best practices in all business processes; benchmarking is a standard part of guiding work as an ongoing process</p>	<p>Determination of ACODE's ability to demonstrate how, what Luhmann (1995) called double contingency generates a shared perspective and mutual capacity to influence each other.</p>

source: adapted from Camp and De Toro, 1999, pp. 12.3-12.4

**Table 1. The ACODE Benchmarks and study in relation to a typical 5-stage, 10-step benchmarking process.**

Data was collected through the shared benchmarking instruments used by HEIs, notes from the discussions by participants at the three-day summit where participants met, and two surveys (one that was given as part of the summit session and a follow-up given online 9 months later). These different proceedings can be described as follows:

- The individual HEI benchmarking instruments were collected and analysed by the ACODE team overseeing the exercise and individual reports were returned to participating HEIs. The reports include a review of the self-assessment, comparative findings, and individual benchmark with recommendations for improvement, and an overall conclusion section. The results from the internal benchmarking documents are not reported due to institutional confidentiality.
- Results from the Summit discussions were centred on each HEI participant describing how they came to give themselves their particular rating followed by a debate as to why an institution gave themselves a particular rating and what would be considered good/best practice. The sharing of practice and the ensuing debates allowed each HEI to make a judgement on the veracity of their self-assessment. Elements of these transactions were included in the feedback provided to individual HEIs and are also not reported here.
- The Summit evaluation instrument was online, consisting of 30 questions total. Five of the questions were on institutional data; 20 questions focused on the activities, resources and their participation in the activity; and there were 5 open-ended responses seeking to elicit further direction and feedback for future activities and a possible extension of the TEL benchmarks and their application methodology. Results are reported below.
- The follow-up survey questions sent in March 2015 provided to all participants who attended the Summit to learn the potential level of follow-up activity generated by the benchmarking activity and the Summit upon their return to their respective HEIs. This survey consisted of only seven open-ended questions plus basic demographic data to allow for the alignment with the previously collected data. Results are reported below.

Self-assessment is a component of the ACODE benchmarking process, combining what is often seen as disparate processes (Alstete, 1995). The questions for both instruments reflect this reality. ‘Benchmarking can play a role in offering critical input into the evaluation step of the self-assessment process regarding the current performance of one’s institution and providing the frame of reference for measuring quality and/or cost of current operations’ (Chow, 2012, p. 39). The team responsible for the study designed the questions in consultation with the ACODE leadership team. Questions from surveys utilised for similar purposes from the literature informed the development of the instrument; however, clarity and relevance were the primary drivers in constructing the two questionnaires used in the studies (cf. Cox & Cox, 2008). Emphasis was given to ensuring questions were appropriate to the respondent’s role and knowledge, directly addressed ACODE’s need to know specific information about the benchmarks and associated process and allowed for honest answers.

Neither instrument was validated as this is the first step of what will be an ongoing effort to promote the use of the ACODE Benchmarks and to provide a deeper analysis capability to capture evidence of its success. In this regard, the steps were the beginnings of establishing content validity (Sireci, 2007) as the study of content validity brings together the items affecting how the data are obtained (Delgado-Rico, Carretero-Dios, & Ruch, 2012).

Pursuing content validity at this early stage reflects the premises of what Pawson and Tilley (1997) termed realistic evaluation. The context of the benchmarks and the benchmarking exercise these represent an additional activity in the dynamics of HEIs that have long implementation chains and multiple stakeholders, often implemented amid the turbulence of other interventions whose impacts can interfere with those from other activities who then adapt to maintain sustainability and viability (cf. Pawson, Wong, & Owen, 2011). The difficulty, then, is to ensure the evaluative and research processes capture the effects of the benchmarks independent of the other institutional QA and QC processes used to enhance performance. Both approaches allow for the use of qualitative and quantitative techniques used to analyse other quality systems (e.g., importance–performance analysis [IPA], fuzzy analytic hierarchy process [FAHP] – Chen, Chen, & Padró, 2015) and assure ACODE’s goal of having the benchmarks become part of ongoing quality cycles.

Correspondingly, initial analysis of the data was based on descriptive statistics of frequency responses and qualitative responses from the open-ended questions. The approach taken by ACODE echoes early quality methodology that supported the idea of analytical simplicity to begin to make sense of what processes were fostering, especially when making comparisons with other organizations (Padró, 1988) in preparation for subsequent more sophisticated analysis as already described.

#### **4.0 Results**

A three-day summit held in June 2014 at Macquarie University in Sydney. There, 24 institutions from 5 countries undertook to use some or all of the benchmarks and confidentially share their results with the other participants. Fifteen Australian universities, 6 from New Zealand, plus one university from the UK, South Africa and Fiji, were present at the Benchmarking Summit. Thirteen HEIs did 2 benchmarks; five universities undertook an analysis of 4 benchmarks; three institutions took on 3 benchmarks; single universities did 1 benchmark or 5 of the benchmarks; and one university decided to do all 8 benchmarks.

#### 4.1 Summit online evaluation instrument

Thirty-five out of the 38 total participants at the Summit completed the evaluation form, for a 92% response rate. Table 2 presents the results from 26 of the 30 survey questions. Questions 1 through 4 were demographic in nature and are not reported. Question 5 asked participants for information that could create confidentiality concerns and is also not reported.

The 26 questions reported in Table 2 are paired together based on thematic connections of interest to ACODE and the results are reported accordingly in the third column. Question 26 can be considered an open question as are questions 27 through 30. Responses to these are categorised by type of information provided.

Question	Paired question	Results
<b>Q4:</b> I led this activity for my institution	<b>Q6:</b> The way the performance indicators were written for the benchmarks made what was required clear and unambiguous	71% of Summit participants led the benchmarking exercise at their HEI, with the remainder assisting in the process. 89% of these individuals felt that the benchmark indicators were clear and unambiguous, although only 11% strongly agreed with this statement, suggesting some minor issues in this regard that need investigating.
<b>Q7.</b> The benchmarks should cover more topics related to TEL and in greater detail	<b>Q13.</b> I do not believe that the benchmarks go far enough	69% of respondents believed the benchmarks were appropriately comprehensive in content while 91% thought the benchmarks provided adequate scope.
<b>Q8.</b> I found this activity personally very rewarding	<b>Q24.</b> I found what the other institutions had to share particularly informative	91% of the participants found the exercise personally rewarding and the same percent found the sharing of information from other HEIs informative.
<b>Q9.</b> The benchmarking activity will give my institution plenty of food for thought	<b>Q11.</b> I believe the outcomes of this activity will provide an impetus for change at my institution	100% of participants agreed (66% strongly agreed) that the benchmarking activity had given their institution plenty of room for thought while 79% agreed that this would provide an impetus for change within their HEI; however, the extent of motivation to get things done is a potential concern given that only 21% strongly agreed with question 11 with the remaining 58% only agreeing that there is an impetus.
<b>Q10.</b> The position I hold makes me the right kind of person to be involved in this activity	<b>Q14.</b> There are others in the institution who should have been making the types of judgments required for this activity	94% of the participants agreed, or strongly agreed that they were the right people to be involved in this activity on behalf of their institution. However, probably representative of the variation in the number of participants in the exercise (Q26 below) which is reflective

		<p>of the different approaches HEIs used toward this exercise and/or other institutional context issues, Q14 provided the most mixed set of responses. 53% of respondents believed that there were others at their HEI who should have been making the types of judgments while 21% indicated no agreement or disagreement or disagreed with the premise of the question. Notably 5% of respondents strongly agreed while 5% strongly disagreed that there are others at their HEI who should have been making the types of judgments required for this activity. The responses to these two questions provide additional considerations to the responses for Q17 and Q23.</p>
<p><b>Q12.</b> I found most of the information I needed to provide credible evidence for most of the performance indicators</p>	<p><b>Q15.</b> There is sufficient scope within the current suite of benchmarks to cover most scenarios at my institution</p>	<p>63% of respondents agreed and 6% strongly agreed that they were able to source sufficient and credible evidence to support their judgments around the PIs. HEI context could be a bounding element based on that 24% of respondents strongly agreed while 68% agreed that the scope within the benchmarks are able to cover most scenarios found at their HEI.</p>
<p><b>Q16.</b> I found it was reasonably easy to get institutional buy-in to participate in this activity</p>	<p><b>Q22.</b> The self-assessment template was particularly useful</p>	<p>85% of respondents strongly agreed or agreed that it was reasonably easy to get institutional buy-in to participate in this activity while 43% strongly agreed and another 43% agreed that the template was useful.</p>
<p><b>Q17.</b> This activity was relevant to me level of decision making capacity within the institution</p>	<p><b>Q23.</b> I was able to make the right kind of judgments in relation to my institution’s capacity in TEL</p>	<p>Responses to both items suggest that the exercise was properly targeted. 20% of respondents strongly agreed and 60% agreed that the activity was appropriate to their decision making capacity while 25% strongly agreed and 69% agreed that they were able to make appropriate judgments regarding their HEI TEL.</p>
<p><b>Q18.</b> The ACODE benchmarks made me think twice what we, as an institution, are doing</p>	<p><b>Q21.</b> The benchmarks prompted me to consider strategic changes that we could reasonably implement in the near future</p>	<p>Respondents felt the benchmarks helped their HEI critically self-assess their capacity in TEL, with 34% strongly agreeing and 51% agreeing that the benchmarks made them more aware of what they are doing and 34% strongly agreeing and 54% agreeing that undergoing the benchmark review</p>

		process prompted them to consider implementable strategic changes.
<b>Q19.</b> I will use the ACODE benchmarks again	<b>Q20.</b> I could see the ACODE Benchmarks becoming a regular part of our institution quality enhancement suite of tools	Responses to both questions indicate an interest to continue using the benchmarks, with 97% strongly agreeing or agreeing to use the benchmarks again (63% strongly agreeing, 34% agreeing) and 83% strongly agreeing (40%) or agreeing (43%) to make them a regular part of their HEI's quality enhancement suite of tools.
<b>Q25.</b> I learned a number of strategies from the other institutions that I would like to see implemented at my institution	<b>Q27.</b> How often do you think ACODE should facilitate something like this; every year, every second year, other?	8% strongly agreed and 85% agreed they had learned some strategies from others that could be implemented at their institution and when asked, 54.3% (n=19) indicated a desire to see ACODE facilitate this type of exercise every 2 years (an additional 22.9% or 8 respondents indicated for the exercise to occur every 2 <sup>nd</sup> or 3 <sup>rd</sup> year.
<b>Q26.</b> Participants per institution	Open-ended question	Range of participants in the HEI self-review process was from 1 to 22. Average = 8.08 Mode = 7 Median = 7 SD = 5.49
<b>Q28.</b> How would you have done things differently in the inter---institutional Activity?	Open-ended question	Reponses fell into 6 broad categories:  1. Extend the activity to three [full] days to give sufficient time for small group work and more discussions, so the PIs can be dealt with in more depth  2. Analyse more of the data beforehand for theming purposes  3. Have the opportunity to share more evidence around the PIs and provide some examples of what the different levels may look like  4. Do the benchmarks in order  5. Broaden internal self-assessment groups to get more robust internal data  6. Generally very satisfied with how the exercise was handled
<b>Q29.</b> Further comments that would help make the Benchmarks, or the supporting documentation, more user---friendly, or to	Open-ended question	Responses were classifiable into 5 recurrent themes:  1. ACODE should look to develop a series of web---based forms for the self---assessment and consolidation documents, potentially linking this with

<p>identify things they felt might be missing</p>		<p>a collaboration space in the future</p> <ol style="list-style-type: none"> <li>2. Develop examples of good practice to help participants as they come to self-assess</li> <li>3. Provide more details around PIs in the Session Notes document</li> <li>4. Further reduce some of the repetitions within the PIs</li> <li>5. Include more terms in the Glossary and further simplify some of the language used in the document</li> </ol>
<p><b>Q30.</b> Opportunity to make unguided (open) comments</p>	<p>Open-ended question</p>	<p>Comments were overwhelmingly of a complimentary nature. Two comments exemplifying the positive view toward the exercise are:</p> <p><i>“Great opportunity to meet and share where everyone is at. The benchmarking exercise is a great self reflective practice that is reinforced through the feedback and deliberation from other institutions.”</i></p> <p><i>“I really enjoyed this Benchmarking Summit, I have learned a lot from the inter-institutional activity and will definitely be sharing and pushing for these benchmarks to be accepted at our institution. Thank you for facilitating this and look forward to the institution following up with the benchmarks in the future.”</i></p>

**Table 2. Summit evaluation questions that are thematically linked and responses**

**4.2 Follow-up online survey to Summit participants**

Twenty-five HEI leaders from the 24 participating universities who were at the Summit were invited to fill out the follow-up survey. Twenty-two of the leaders filled it out, for a response rate of 88%. All responses were open-ended; however, as found in the first survey, responses tended to fall under general categories as seen in Table 3 below. Table 3 presents the items, frequency response rates and qualitative data generated from the questions.

<b>Open-ended questions</b>	<b>Responses</b>
<p><b>Q1.</b> Reflection on their experience and on how useful, or otherwise, they felt it had been for both them personally and to their institution.</p>	<p>All respondents indicated they saw the experience as useful.</p> <p><i>‘The benchmarking was a very useful activity. It concretised and made tangible, in a comprehensive way,</i></p>

	<p><i>the sorts of digital learning decisions universities need to consider.'</i></p>
<p><b>Q2.</b> Description of what they had formally done within your institution since the activity.</p>	<p>Responses fell into three categories: those continuing onward with their benchmarking activities (48%), currently nothing is happening because of other intervening issues but intending to continue (32%), or stopped or stalled because of changes occurring at the HEI (20%). Five of 22 respondents presented formal written reports to senior management, although many had actively brought this to the attention of their senior managers.</p> <p>A comment representative of those who continued the work begun by the exercise was:</p> <p><i>'I have fed back the comparative reports to the individuals who participated in the benchmarking process with me, and that was of interest to them, although I haven't followed up with whether they have taken it any further. I did provide a verbal and summarised report for my manager, although mostly this was for internal purposes.'</i></p> <p>A representative view of those who plan to pick up the work at a later date was:</p> <p><i>'This benchmarking process is noted on the plan for an outcome to demonstrate how the University is moving towards achieving one of its Strategic imperatives related to Excellence in Teaching. I have presented an overview of the project, and how we are going about it, to the Committee for the Advancement of Learning and Teaching (a University-level Committee chaired by the DVC...'</i></p> <p>A typical response from those who indicated their continuation with the use of the benchmarks either stalled or stopped was:</p> <p><i>'I have fed back the comparative reports to the individuals who participated in the benchmarking process with me, and that was of interest to them, although I haven't followed up with whether they have taken it any further. I did provide a verbal and summarised report for my manager, although mostly this was for internal purposes.'</i></p>
<p><b>Q3.</b> Description of how useful the follow-up documentation had been (the formal ACODE report on the benchmarking activity containing their data aligned with the data from the other institution involved.</p>	<p>Responses to the item suggested a breakdown into two elements. The first one was the usefulness of the follow-up documentation. Seventy-two percent found the exercise useful (28% very useful, 44% useful), while 12% thought improvements were needed to make it more useful and 16% indicated that they could not give it attention at this time.</p> <p>A representative view for those who found the follow-up useful or very useful was summed up in this statement:</p>

	<p><i>'It has been helpful because most of the time it is affirming to know that we are not the only ones who are struggling with some aspect or other. At other times, it is clear that we are outliers. It is always useful to get a sense of where one sits in comparison with others. The documentation has got us into good solid discussions at times'</i></p> <p>The preponderant view of those who thought improvements are needed was captured in this statement:</p> <p><i>'The comparative documentation was of some interest, although I had managed to record a lot of the data during the workshop.'</i></p> <p>The typical opinion of those who could not give the process attention at this time and therefore could not determine its usefulness was:</p> <p><i>'I'm not sure that the follow-up documentation has been used by anyone other than me - as reference to evidence the process we went through.'</i></p> <p>The second element was regarding the issue of anonymity of the data. None of the respondents seem to have a concern; however, only 60% of respondents provided direct comments while others made implicit references to their comfort with the follow-up report data. Of those providing comments the two comments made seem representative:</p> <p><i>'[It's] nice to know we never walk alone...'</i></p> <p><i>'Very useful, i.e. it contextualised our (USP) frameworks with what other institutions were doing (or not doing).'</i></p>
<p><b>Q4.</b> Comment on the proposition that ACODE would now formally facilitate a benchmarking activity every two years</p>	<p>All respondents believed that a Summit-like exercise was an excellent idea as reflected in this comment:</p> <p><i>'The two-year approach is excellent. I would hope our University prepares its participation against all nine Benchmarks. The de-identified approach to accessing overall trends is all we need. We [are] not looking to ACODE for any kind of competitive league table... information leading to continuous improvement is the 'edge' we require.'</i></p> <p>Respondents definitely saw a connection between the exercise and an online tool (see the next survey question) as exemplified by this comment:</p> <p><i>'Very useful. I think the whole self-assessment should be available online prior to the event to maximise the discussion time, and comments/re-assessment discussions captured online as well. Definitely should be shareable under conditions of confidentiality.'</i></p>
<p><b>Q5.</b> Comment on how useful it</p>	<p>The proposed addition of an online tool to help them gather</p>

would be for them to have access to an online tool to assist them in the collection and reporting of their institutional data.	and collate their benchmarking data identified in the comments provided in Question 29 of the first survey was overwhelmingly supported (95% agreement).  The following comment captured the collective feelings of the responses:  <i>'An online tool for collecting and reporting data would be invaluable. I don't see why it shouldn't be shareable with other participating organisations, provided the same confidentiality conditions apply as with the 2014 summit.'</i>
<b>Q6.</b> Comment on whether the data collected by that tool should be shareable with other participating institutions.	Results same as Question 5 above. The sentiment shared by respondents was that:  <i>'It is important that we share our ideas and findings with others as long our anonymity as an institution is upheld.'</i>
<b>Q7.</b> How useful was it to sit-in on all the discussions (which was the case), or should future events be broken-up into smaller groups to try and streamline the activity, or was there more value to them in hearing what other institutions were doing across the other areas?	77% of respondents agreed that it was more helpful to sit in on all the sessions, 15% preferred more focused sessions (e.g., sessions focusing only on the benchmarks they participated in) and 8% made alternate suggestions. This positive sentiment was reflected by comments such as:  <i>'The four we didn't do we got more learning from sitting in on those, as opposed to the four we had done as we already knew what we knew. But it would depend on how many were going to be there. It was definitely good to go to all of them.'</i>  <i>'In our case, this proved to be even more valuable than sitting in on the benchmarks we had selected since we gained many new insights in a very short space of time.'</i>

**Table 3. Second survey questions with frequency responses and illustrative qualitative data**

## 5. Discussion

### 5.1 Recommendations

A review of the evidence collected by the four sources of data that made up this study yielded six overarching recommendations to consider as next steps (Sankey, 2014). These are elaborated upon below. Some of the recommendations were the result of data captured from the interactions, internal benchmarking documents the participating HEIs shared with ACODE at the Summit and follow-up interviews with HEIs using specific benchmarks.

**R1. That over the next few months some minor adjustments be made to the Benchmarks, based on those things identified by the Review Group and from the Evaluation Survey.**

Two examples are provided to indicate support for the recommendations afforded throughout the responses given in both instruments. These examples demonstrate how suggestions have led to the identification of modifications that were then followed up within the exercise

process and became part of next-step thinking for the ACODE benchmarks. Additional suggestions for minor adjustments can be seen in Q28 and Q29 (Table 2).

The first example comes from Q27 from the first survey which suggested that participants were interested in holding a benchmark exercise such as the Summit every two years (Table 2). This was followed up in the second survey that specifically asked invited participants if they were interested in doing a Summit-like exercise every two years (Q4, Table 3). All of the second survey respondents believed that a Summit-like exercise was an excellent idea and is the basis for Recommendation 4 below.

The second example comes from Q29 from the first survey that identified five types of suggestions (Table 2), some of which were the basis for the second survey and also part of the basis for Recommendation 5. For example, one of the categories in the answers provided in Q29 was that *ACODE should look to develop a series of web--based forms for the self--assessment and consolidation documents, potentially linking this with a collaboration space in the future*. The suggestion was incorporated as a question in the follow-up survey instrument (Table 3). Ninety-five percent of respondents to the second instrument were in favour of such an approach.

## **R2. That the final set of benchmarks be presented and endorsed at the ACODE 66 business meeting in Melbourne.**

ACODE 66 was workshop and business network meeting held on the 6<sup>th</sup> and 7<sup>th</sup> of November, 2014 at The University of Melbourne. The ACODE Benchmark leader, Associate Professor Michael Sankey presented his findings at that time. The meeting minutes of the Business and Networking Meeting at ACODE 66 <http://www.acode.edu.au/mod/resource/view.php?id=441> stated that *'Results from the Benchmarks will play a bigger role in learning and a stronger link to teaching and learning standards, innovation, planning and budgeting.'* Logistics based on when to do it around other scheduled events were seen as a challenge that can be overcome.

## **R3. That future iterations of the Benchmarks look to establish if there is a stronger case to merge Benchmarks 7 and 8, and by extension Benchmarks 5 and 6 that use a similar methodology.**

Data from the surveys did not actually capture an explicit interest in merging Benchmarks 7 and 8 and possibly Benchmarks 5 and 6. The evidence for this recommendation came from an analysis from individual HEI documents used to partially fulfil the Summit's requirements. The use of the benchmarks by 24 universities provided guidance on next steps.<sup>i</sup>

ACODE had been considering the idea of merging these benchmarks to reduce known duplication – an issue that was captured in the surveys (directly, Q29, Table 2; indirectly, Q6, Q7 and Q13, Table 2). A follow-up meeting by ACODE's benchmarking review team, who had further discussions with participants who performed the exercise using these benchmarks, identified some changes to the exercise (see Q28, Table 2), but not to the benchmarks themselves at this time to pursue the mergers at this time (Sankey, 2014). It was decided that more evidence was needed, thus the recommendation to revisit the merger issue in the future.

## **R4. That ACODE agree to facilitate a formal benchmarking activity every second year and that there be allowance for this made within business processes, similar for that of**

**the Learning Technologies Leadership Institute (LTLI). In doing so, consideration should be given to whether the activity should stretch over three full days.**

Per the previous discussion for **R1** above, there was confirmed interest on the part of the participants representing the 24 HEIs for ACODE to facilitate a formal benchmarking activity every second year. And as per comments for **R2** above, interest begat thinking of commitment to sponsoring this type of ongoing exercise; logistical issues on when to run this exercise; if it should be available to all interested universities and/or if there should be an invitation of universities, creating a cycle of participants similar to TEQSA; making it similar to other ongoing ACODE developmental activities such as the LTLI; and determining an optimal format for participants.

Discussions pertaining the creation of a biennial benchmarking exercise are ongoing at the time of this writing as are the logistical concerns to provide the greatest possible value-add to HEIs and individual participants. HEI level interest and commitment from senior campus administrators are crucial to this process. The impetus to continue is reflected in Sankey's (2014) observation that 'If the data presented in the evaluation of the Benchmarking Summit is any indicator, the value of this form of activity, to the institutions involved and ultimately the sector, is very significant' (p. 16).

**R5. That a series of online tools and a collaboration space be established within the ACODE site to make it easier for institutions to engage in formal inter-institutional benchmarking activities.**

Participants were keen on this idea during the Summit and eight months later. As already discussed in **R1** above, comments from both surveys were unambiguous in the interest such a tool would provide individuals involved in TEL activities and decisions and HEIs in a broader scope, making the decision to pursue this possibility easy (outside the commitment of resources and time to provide ongoing support). There was close to unanimous concerns about anonymity to preserve confidentiality and ostensibly a reflection of the tension of competitive cooperation. At this point, the issue for ACODE is not really about if, but about how, when and how to maintain (currency, monitoring, support).

**R6. When the online collaborative space is established, that an area be provided to allow institutions to share good practice examples that align with the performance indicators.**

Participants valued the ability to see what other HEIs were doing to see where they were at in relation to other HEIs with TEL. There is an interest to further and extend that self-reflection by pursuing a strategy that will make the learning possible by benchmarking a more dynamic activity. This is critical as the collaborative space can help HEIs compare policies and procedures, resourcing, administrative and management support in relation to TEL. Countenancing the creation of the collaborative space as based on the comments by the participants in the ACODE Benchmarks meets the TEQSA (n.d.b) expectation for benchmarking as a shared conversation and a form of peer development that helps drive institutional change and quality improvement.

## ***5.2 The benchmarking process***

In section 3.2.2 the ACODE process was compared to a traditional benchmarking process. Table 1 identified what ACODE had already done by explaining the key parts of the process. Table 4 provides a current judgment of what ACODE has done and the status of the process based on the evidence provided in this paper.

<b>Benchmark phase</b>	<b>Benchmark steps</b>	<b>Achievement status after Summit (accomplished, partial, no)</b>
Phase 1: Planning	1. Deciding what to benchmark 2. Identify whom to benchmark 3a. Plan the investigation and 3b. Conduct it	1. Yes 2. Yes 3a. Yes 3b. Yes
Phase 2: Analysis	4. Have a full understanding of internal business processes before comparing them to external organisations; examine the best practices of other organisations; measure the gap 5. Project future performance levels	4. Yes, but partial at the HEI level 5. Partial at HEI level, being developed at ACODE and sector levels
Phase 3: Integration	6. Communicate findings and achieve acceptance of findings; refine goals and incorporate into planning process 7. Establish functional goals reflecting projected improvement, integrating targets and strategies into business plans and operational reviews	6. Yes 7. Yes, with main focus of the ACODE benchmarking exercise itself
Phase 4: Action	8. Develop & implement action plans 9. Monitor progress 10. Recalibrate benchmarks	8. Next step plans under development 9. Yes, next steps under development (modification and expansion) 10. Under discussion, no for immediate future as more evidence is needed
Phase 5: Maturity	Determining when a leadership position is attained; incorporating best practices in all business processes; benchmarking is a standard part of guiding work as an ongoing process	Leadership position: partial to yes based on recognition and interactions with CADAD, TEQSA and other professional associations who refer to the ACODE Benchmarks  Incorporating best practices in all business processes at ACODE: partial  Incorporating best practices in all business processes at HEIs: no, but in development phase

**Table 4. ACODE benchmarking process in relation to a typical benchmarking process and status for each of the ten steps**

ACODE's benchmarks fill a gap not covered by CADAD or TEQSA. The latter organisation seems to recognise the usefulness of the benchmarks (TEQSA, n.d.b; Booth, 2012) while the former works closely with ACODE on learning and teaching matters related to TEL. What ACODE is doing aligns with TEQSA's interest in changing policy management functions in the sector from coordinating policy development to implementing, reviewing, improving and benchmarking policy (Freeman, 2014).

Table 5 shows how the ACODE Benchmarks are able to assist HEIs meet TEQSA's expectations from institutional benchmarking activities. While there is a strong capacity to help HEIs meet these expectations, the benchmarking process does present the limitation that it can help HEIs, but cannot make them perform all of the activities. In this regard the benchmarks and the benchmarking process aligned with the benchmarks (for the self-study, the institutional report and the cross-institutional analysis) facilitate HEI internal processes in documenting learning and teaching benchmarking activities at the organizational level and for process and outcome analysis (TEQSA, n.d.b). However, where the ACODE benchmarks can really assist Australian HEIs is in best practice benchmarking because the collaborative nature and cross-institutional sharing of sector practice will provide a systemic, robust and less burdensome approach toward identifying and finding best practice practiced by HEIs.

<b>Indicative elements contributing to meeting TEQSA expectations for benchmarking</b>	<b>ACODE benchmarking process ability to meet TEQSA indicative elements</b>
Identify areas for improvement and areas of good practice (e.g., benchmarking reports)	Yes, through benchmark exercise documentation and later comparative ACODE benchmark analysis to HEI
Analysis of reasons for variation or commonality (e.g, benchmarking reports, follow-up interviews)	Yes, through ACODE benchmark analysis report to HEI
Formulate improvement strategies (e.g., action plans, elements of other plans)	Yes, see endnote i
Reporting results/analysis of benchmarks internally considered by appropriate governance body or person (e.g., minutes of meetings, emails, file notes)	No, as these are internal to the HEI and would be supplementary
Implement agreed action plans	No, this is an HEI responsibility, but could be captured in next benchmark exercise round
Review of outcomes of implemented actions against expected outcome and subsequent benchmarking results	Potentially yes, especially if ongoing biennial benchmarking exercises become standard practice

**Table 5. TEQSA benchmarking expectations and ACODE Benchmarks ability to meet them**

## **6.0 Conclusions**

The ACODE Benchmarks and the benchmarking exercise activities demonstrate a robust approach to benchmarking. There are clear indicators that four out of the five phases that benchmarks go through are clearly in place. This is especially the case for Phases 1 and 2, planning and analysis. Much that is already in place assists HEIs in their analysis. The implementation phase (Phase 3) is healthy, but here the review is dependent on whether the

focus is within the ACODE benchmarking process itself or on what happens within the HEIs and/or the overall higher education sector. Phase 3 is very active within ACODE. Political considerations and organizational contexts pose challenges to how HEIs are able to enact and perform sensemaking from the benchmarking activities. The same observations for Phase 3 apply to Phase 4, the action phase. There is sector interest in and recognition of the ACODE Benchmarks and this recognition is driving the increase use of the benchmarks and the benchmarking exercise. It remains to be seen if the ACODE Benchmarks could end up as part of the prescriptive approach toward regulatory compliance for all sector HEIs.

Many of the issues we face in our institutions can be remediated by simply taking the time to self-assess against a set of quality indicators, like those found in the ACODE Benchmarks for TEL. Extending the self-reflection process by sharing current practice with those in similar circumstances, what results is enhanced QA and enhanced quality learning and teaching in the technology enhanced learning stage. The expectation here is a simple one, to ensure that TEL meets the same quality expectations as face-to-face learning or to even better it. ACODE's role in the sector places it in a leadership role. On the other hand, there is still improvements needed to make the Benchmarks meet Phase 5 maturity expectations. ACODE may not quite be there, but it is getting there. At the least, promoting and expanding the benchmarking exercise process will ensure that HEIs see enough value to embrace it more than they already have. The benchmark practice is in keeping with the International Network of Quality Assurance Agency's (INQAAHE) good practices for distance learning and is in keeping with other international agency approaches and expectations (Sankey & Padró, 2013; Sankey, 2014). One of the next steps to pursue given TEQSA's continued interest is to establish a risk management component to the benchmarks (Sankey & Padró, 2015). It is clear that the ACODE Benchmarks for TEL provide a unique catalyst to help HEIs establish regular commitment to the use of these benchmarks for their own benefit as well as to assist them in meeting their regulatory compliance obligations as one way ensure a high level of quality in their TEL practices that are recognised and valued for their excellence.

## References

Alstete, J. W. (1995). *Benchmarking in higher education: Adapting best practices to improve quality*. ASHE-ERIC Higher Education Report, #5. Washington, DC: George Washington University.

Australasian Council on Open, Distance and e-learning [ACODE]. (2014). *Benchmarks for technology enhanced learning*. Canberra: Author. Retrieved from: <http://www.acode.edu.au/course/view.php?id=5>

Booth, S. (2012). Utilising benchmarking to inform decision-making at the institutional level: A research informed process. *Journal of Institutional Research*, 18(1), 1-12.

Boxwell, R.J., Jr. (1994). *Benchmarking for competitive advantage*. New York: McGraw-Hill.

Bridgland A. & Goodacre, C. (2005). Benchmarking in higher education: A framework for benchmarking for quality improvement purposes. In *Proceedings of EDUCAUSE in Australasia 2005, Auckland, New Zealand*. Retrieved from: <http://repository.unimelb.edu.au/10187/1106>

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. (5<sup>th</sup> ed.). (pp. 12.1-12.20). New York: McGraw-Hill.

Chen, I-S, Chen, J-K, & Padró, F.F. (2015). Critical quality indicators of higher education. *Total Quality Management & Business Excellence*. DOI: 10.1080/14783363.2015.1050178

Chow, T.K.C. (2012). Using institutional survey data to jump-start your benchmarking process. *New Directions for Institutional Research # 156*, 37 – 45.

Cox, J., & Cox, K.B. (2008). *Your opinion please! How to build the best questionnaires in the field of education*. (2<sup>nd</sup> ed.). Thousand Oaks, CA: Corwin Press.

Delgado-Rico, E., Carretero-Dios, H., & Ruch, W. (2012). Content validity evidences in test development: An applied perspective. *International Journal of Clinical and Health Psychology*, 12(3), 449-460.

Ettorchi-Tardy, A., Levif, M., & Michel, P. (2012). Benchmarking: A Method for Continuous Quality Improvement in Health. *Healthcare Policy*, 7(4), e101–e119.

Freeman, B., (2014): Benchmarking Australian and New Zealand university meta-policy in an increasingly regulated tertiary environment, *Journal of Higher Education Policy and Management*. 36(1), 74-87. Retrieved from: <http://dx.doi.org/10.1080/1360080X.2013.861050> DOI: 10.1080/1360080X.2013.861050

Jackson, N., and Lund, H. (2000). Introduction to benchmarking. In Jackson, N., & Lund, H. (Eds), *Benchmarking in Higher Education*. (pp. 3-12). Buckingham, UK: Open University Press.

Kanji, G.K., & Asher, M. (1996). *100 methods for total quality management*. London: Sage Publications.

Luhmann, N. (1994/1984). (Trans. By J. Bednarz, Jr. & D. Beacker). *Social systems*. Stanford, CA: Stanford University Press.

McKinnon, K. R., Walker, S. H., & Davis, D. (2000). *Benchmarking: A manual for Australian universities*. Canberra, Australia: Department of Education, Training and Youth Affairs, Higher Education Division.

Meade, P.H. (2007/1998). *A guide to benchmarking*. Retrieved from [http://quality.curtin.edu.au/local/docs/Guide\\_to\\_Benchmarking\\_Oct2007.pdf](http://quality.curtin.edu.au/local/docs/Guide_to_Benchmarking_Oct2007.pdf)

Padró, F.F. (1988). *Quality Circles and Their Existence in Present-Day School Administration*. Unpublished dissertation. Tucson, AZ: University of Arizona.

Pawson, R., Wong, G., & Owen, L. (2011). Known knowns, known unknowns, unknown unknowns: The predicament of evidence-based policy. *American Journal of Evaluation* 32(4), 518-546.

Pawson, R., & Tilley, N. (1997). *Realistic evaluation*. Los Angeles, CA: SAGE.

Sankey, M. (2014). Benchmarking for technology enhanced learning: taking the next step in the journey. In *Proceedings of the 31st Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE 2014)*. (pp. 668-672). Macquarie University.

Sankey, M. & Padró, F.F. (2015). *Findings from a 24 university benchmarking exercise regarding the benchmarks' fitness for purpose and capacity to generate useful quality assurance information*. Poster presentation at INQAAHE Bi-annual Conference, Chicago, IL, USA, 4-6 April 2015.

Sankey, M. & Padró, F.F. (2013). Using distributed learning as a measure to capture additional data on the quality of technology enhanced learning (TEL). In 2013 International Network of Quality Assurance Agencies in Higher Education (INQAAHE) Biennial Conference. INQAAHE Website retrieved 04-12-2013 from <http://inqaah.heeact.edu.tw/index.php?r=site/download&category=2#.UWeBHcri7PQ>

Sireci, S.G. (2007). Content validity. In Salkind, N.J., & Rasmussen, K. (Eds.), *Encyclopedia of measurement and statistics*. (pp. 182-184). Thousand Oaks, CA: Sage Publications.

Swift, J.A., Ross, J.E., & Omachonu, V.K. (1998). *Principles of total quality management*. (2<sup>nd</sup> ed.). Boca Raton, FL: St. Lucie Press.

Tertiary Education Quality & Standards Agency [TEQSA]. (n.d.a). *TEQSA glossary of terms*. Retrieved from <http://www.teqsa.gov.au/media-publications/glossary>

Tertiary Education Quality & Standards Agency [TEQSA]. (n.d.b). *TEQSA Guidance Note: Benchmarking*. Retrieved from <http://www.teqsa.gov.au/sites/default/files/BenchmarkingGNFinal.pdf>

Thomas, B. (1995). *The human dimension of quality*. London: McGraw-Hill Book Company.

<sup>i</sup> Here is an example of how data for Benchmark 5 was collected that was used in making the recommendations.

**Benchmark 5 – Staff professional development for the effective use of technology enhanced learning**

<b>I. Scoping statement</b>
<b>II. Good practice statement</b>

**III. Team consolidation**

<b>Benchmark 5: Staff professional development for the effective use of technology enhanced learning</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. A framework for staff development in technology enhanced learning is part of the institution's learning and teaching strategy.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence:</b>					
2. Processes are in place and in use to identify staff development needs in support of the institution's strategy for technology enhanced learning.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence</b>					
3. Educational and technical expertise is used to develop quality programs and resources addressing staff development needs.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence</b>					
4. Coordination occurs between those areas providing staff development for technology enhanced learning across the institution.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence</b>					
5. Staff development for technology enhanced learning is resourced.	1	2	3	4	5
<b>Rationale:</b>					
<b>Evidence</b>					
6. Staff development programs are delivered flexibly and address differing skill levels.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence</b>					
7. Evaluation data is used to inform the planning for continuous improvement of staff development processes.	1	2	3	4	5
<b>Rationale</b>					
<b>Evidence</b>					

**IV. Inter-institutional comparison:** Ratings (actual) from the total number of participating HEIs who did this benchmark as part of the exercise.

<b>Institution</b>	<b>PI-1</b>	<b>PI-2</b>	<b>PI-3</b>	<b>PI-4</b>	<b>PI-5</b>	<b>PI-6</b>	<b>PI-7</b>
XXXX	3	3	3	3	2	2	2
XXXX	3	3	4	3	4	2	3
XXXX	3	3	3	3	3	3	4
XXXX	3	3	4	3	3	4	3
XXXX	3	3	3	3	3	3	3
XXXX	3	3	4	3	2	4	4
XXXX	3	2	2	2	2	2	2
XXXX	2	4	3	1	4	2	1
XXXX	3	3	2	3	3	2	2
XXXX	2	2	2	3	2	2	3
XXXX	3	2	3	2	2	2	3
XXXX	3	3	3	3	3	3	2