Introduction
The practice of institutions adopting technology-enabled learning (TEL) has been steadily increasing in momentum for a good two decades now. Although there are many similarities in the way institutions implement TEL, there are also many inconsistencies (Anthony, 2012). In many cases, these inconsistencies are brought to an institution’s attention when students comment on the irregularities they experience in the varied approaches taken to teaching with TEL. A number of institutions, professional bodies and associations have recognised this and have begun to establish a range of quality assurance mechanisms to assist higher education (HE) institutions in aspiring to a greater level of consistency in their TEL practice, at both the macro level (across the whole institution) and the micro level (at the individual course/unit level).

One of the practices that has gained significant momentum is that of institutions benchmarking their TEL practices against an established suite of performance indicators. This involves HE institutions formally self-assessing their current practices across these indicators and then comparing the outcomes of this assessment with those from one or more other institutions who have undergone a similar activity against the same indicators.

Very recently, the Commonwealth of Learning (COL) published a new Benchmarking Toolkit for Technology-Enabled Learning that institutions can apply to their current practice, with the aim of making improvements across a range of performance areas (Sankey & Mishra, 2019). Although this particular tool is new, the concept of benchmarking, and more particularly the methodology of benchmarking TEL practices used in this tool, is not new, and there is now significant evidence for the value of undertaking formal and regular benchmarking activities.
This chapter will first define the benchmarking paradigm to which this tool relates and discuss how this paradigm may be applied in practice. It will then report on the benefits that have been realised by some 58 institutions from five Commonwealth countries that have undertaken similar benchmarking activities over the last six years. It will also demonstrate that the value of benchmarking is seen across multiple levels within an institution, from the macro to the micro levels. The reassurance this can bring to an institution cannot be understated, and this chapter will look to provide some keys principles that, when applied, will help an institution realise similar levels of assurance.

**Benchmarking and Benchmarks**

**Benchmarking**

Benchmarking in HE has been evolving for some time across many levels of practice, at both the discipline level and the business or practice level (for example, the application of TEL). Earlier efforts focused on reputation, but now, benchmarking has become a required component of HE quality assurance, or regulatory compliance schemes (Bridgland & Goodacre, 2005). This is seen quite starkly in Australia, where the quality agency TEQSA (the Tertiary Education Quality and Standards Agency) has developed the *Guidance Note: External Referencing* (including benchmarking), which provides the sector with clear directions about what is expected of institutions in their “monitoring, review and improvement processes” (TEQSA, 2019). In this document, TEQSA defines 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, 2019)

Generally speaking, benchmarking can be either a formal or an informal knowledge-sharing process based on the comparative analysis of practices for improvement purposes beyond that of evaluation (Ronco, 2012; Tomlinson & Lundvall, 2001). Early forms of benchmarking in the HE sector were seen first in North America in the early 1990s, then in Australia, the UK and continental Europe by about 2000 (Jackson, 2001). This early use was mostly as a continuous improvement tool in response to the introduction of quality standards (Bridgland & Goodacre, 2005; Massaro, 1998).

Thinking first in terms of formal benchmarking, this commonly takes the form of a continuous, structured, data-driven evaluation based on the use of a tool (a set of benchmarks or standards) that is employed to identify, measure and understand practices. The application of such a tool leads to self-improvement and/or the setting of institutional goals towards improvement (Anand & Kodali, 2008; Ettorchi-Tardy et al., 2012).

In contrast, informal benchmarking is more a set of indicators, rather than a formal metric based on statistical precision. Meeting these indicators is usually
demonstrated by providing what is deemed meaningful evidence (Bhatta & Huq, 1999; Braadbaart & Yusnendarshah, 2008). Informal benchmarking is more than simply a comparison of performance, however. This method’s value to an organisation is based on the extent to which useful organisational learning can be gained and then translated into improvements or an action plan (Mann, 2012). Furthermore, in a university situation, benchmarking may be seen as a means of “connecting up relevant stakeholders both within and outside the institution in such a way that leads to knowledge exchange about why, what, where and how improvement might occur” (Garlick & Langworthy, 2008, p. 6).

There are a number of well-rehearsed reasons why HE institutions might undertake benchmarking as a means of helping them reconcile their practice. Elmuti and Kathawala (1997) identified 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 goals.

Importantly for HE, effective 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 practice has reached a particular outcome. Rather, it is commonly achieved by participating in a structured and documented process, and by using this as a means of identifying practices designed to improve one’s processes and recognising what might better meet institutional aims. This is particularly important when an institution wishes to compare or contrast its practices with those of like-minded entities (which is where deep learning happens).

**Benchmarks**

Not surprisingly, benchmarking usually indicates the presence of “benchmarks.” These are the points of reference for performance, typically in the form of setting either baseline indicators and guidelines, or standards that support evaluation activities and the framing of subsequent organisational activities. They can be set externally by a regulatory body or accreditation entity and/or internally (Hart & Northmore, 2011).

In HE, benchmarks should be sufficiently specific to be useful indicators to follow (Hart & Northmore, 2011). The process of setting benchmarks is not dissimilar to standards formation, and benchmarks are generally the result of a consensus-forming process. As with standards, benchmarks are created through consultation with subject experts in the sector and/or other stakeholders who recognise the need for a benchmark and its subsequent application to the sector (International Organization for Standardization, 2010).
The OECD defines a benchmark in HE to be: “The observed performance of a higher education system to which other higher education systems can compare themselves” (OECD, 2017, p. 58). It is this comparison against a set of defined indicators in TEL that the good-practice example provided later in this chapter will focus on.

**Technology-Enabled Learning**

In the context of this chapter it is important first to position the term technology-enabled learning within the broader context of the use of technology within HE to support learning and teaching (L&T). Figure 16.1 indicates (proposes) that there are, broadly speaking, three levels of TEL seen within the sector, largely dependent on the capacity of the following:

1. **The educational jurisdiction.** This refers to how technology might be used by institutions on a continuum, from used simply to provide documents to their students, through to teaching fully immersed in technology-rich spaces, either virtually or in class, using tools such as virtual reality and artificial intelligence.

2. **The national technology infrastructure and geographical constraints.** In some developing countries, there are severe limitations in relation to accessing a computer or the Internet. Again, this sits on a continuum, between a standalone computer that is not networked, through to fully 4G-enabled networks allowing multiple devices to interact and share information across national boundaries.

3. **The level of staff training.** Using technology effectively for teaching students requires certain skills that can be gained either through formal study or through years of experience. This level of skill largely determines to what extent technology is used to support L&T.

Figure 16.1. The nested model of technology use to support L&T.

However, focusing on the first level, the definition provided in COL’s *Technology-Enabled Learning Implementation Handbook* (Kirkwood & Price, 2016, p. 2) is useful to frame the context of TEL for this chapter. It describes TEL as:

the use of technology to support students’ learning. . . . Technology-Enabled Learning is just about making learning possible, whether that means different ways of serving existing learners or, potentially, providing opportunities for learners who were previously regarded as being “out of reach” — that is, those learners who typically have
little to no access to educational opportunities because of a variety of circumstances.

Given this context and the framing of TEL in this way, this provides us with an opportunity to then put together a range of indicators that would help us understand what good practice or performance might look like within an institution, and one based on a collective experience of those within the HE sector.

**Domains of Practice and Performance Indicators Used to Support TEL**

Generally speaking, when developing quality indicators, we are looking to ensure that a base level of quality practices is present across the key domains of institutional practice. However, these domains are indicative and built on the premise that each institution is on a journey towards quality practice, and that individual institutions may be found to be at different stages on this journey. In the COL benchmarks, for instance, ten key domains of practice have been identified (Table 16.1). These domains cover what are seen to be the foundations of quality organisational TEL practice — in other words, those things that need to be in place to assure a level of quality in an institution’s L&T practice using TEL (Sankey & Mishra, 2019).

**Table 16.1. TEL domains of practice.**

|------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------------|-------------------------|-------------------------|----------------------------|--------------------------|-------------------------------------|----------------------------------------|

Simply providing the words “Policy” or “Strategic Plan” as a domain is not enough. Although they indicate that these things should be in place, in practice it is not that simple, as there is a range of associated elements (indicators) that need to be aligned with this to demonstrate that these things are actually in place. These are called performance indicators (PIs). To illustrate, let us take the first two domains of the COL benchmarks and see what PIs have been identified to evidence this practice of that domain (Figure 16.2).

**Figure 16.2. Example of performance indicators in domains 1 and 2.**

**DOMAIN 1: POLICY**
- There is a well-documented TEL policy at this institution.
- The vision and mission of the TEL policy is aligned with the mission of the organisation.
- The vision and mission of the TEL policy are well understood across the organisation.
- There is a commitment on the part of institutional leaders to use technology to achieve strategic academic goals.

**DOMAIN 2: STRATEGIC PLAN**
- There is a strategic plan for the implementation of TEL.
- The strategic plan for TEL is actively promoted by the senior management of the organisation.
- The strategic plan for TEL has goals with measurable outcomes.
- The strategic plan for TEL is supported by adequate financial provisions.
We note in the above that having a policy in place is one thing, but this in itself is insufficient if nobody knows or applies the policy, or if the policy is not aligned to other key elements within the institution. Similarly, there may be a strategic plan, but unless it is enacted and funded accordingly, then it may as well not be there. Therefore, each of the benchmarking domains has a number of PIs in them (either four or six) to help provide a greater level of focus to the domain. Inherent within the PIs is the understanding that an institution may score well in one and not in another, but this information is then used as a stimulus to improve in those particular areas.

Evidence for the Effectiveness of Benchmarking in TEL

Although the COL benchmarks for TEL are relatively new and are the first attempt to look at quality assurance in TEL, very similar tools have been developed in relation to the second level of the hierarchy shown in Figure 16.1 — technology-enhanced learning (also TEL). Examples of this are the ACODE Benchmarks for TEL, and a study of their use reveals important evidence about the value and impact of benchmarking.

Since 2014, the Australasian Council on Open, Distance and e-Learning (ACODE) has been using its Benchmarks for technology-enhanced learning (Sankey et al., 2014) to run biennial inter-institutional benchmarking activities within the Australasian sector (in 2014, 2016 and 2018) and another activity in the United Kingdom (UK) in 2017. These activities have been the subject of many papers (some of which will be cited here); this chapter will not re-rehearse all the evaluations undertaken at these activities but instead will provide a brief meta-analysis of the findings.

Over the last six years, more than 58 institutions, all from Commonwealth countries, have formally used the ACODE Benchmarks to help them quality assure their TEL practice. Of these, 34 were in Australia, 17 in the UK, six in New Zealand, and one each in Fiji and South Africa. Across all these activities, the institutions involved first undertook an internal activity to apply the lens of the benchmarks, and the PIs within them, to their practice.

Participants engaging in these benchmarking activities over this six-year period were asked whether there was sufficient scope within the current suite of PIs in the benchmarks to cover the TEL scenarios at their institution; 93.3% either agreed or strongly agreed with this proposition (Sankey & Pedro, 2019). Further, when asked about their agreement with the statement “The ACODE Benchmarks made me think twice about what we as an institution are doing in relation to TEL,” 92.5% of participants agreed or strongly agreed. This response clearly demonstrates that the benchmarks are helping institutions to critically self-assess their capacity in TEL — the benchmarks’ intended function. Finally, when asked whether “[t]his benchmarking self-assessment activity has provided an opportunity to stimulate a more in-depth discussion about TEL at their institution,” 90% agreed or strongly agreed that the tool had provided this opportunity.

Importantly, a benchmarking activity like this should not reference the voice of just one or two people but should be representative of all those within the institution. Pleasingly, over the years these activities have been running, many people within the Australasian institutions have been involved. For example,
the data indicate that on average, ten people have been involved per institution (Marshall & Sankey, 2017; Sankey & Pedro, 2018).

In key qualitative comments made by those representing their institutions (the leads) in the surveys conducted, some tangible and interesting benefits have been identified. Typical statements about the benefits include (Sankey & Pedro, 2018):

- “It has helped us to better align our activities with the university’s goals.”
- “informed the formation of a new unit and teams”
- “helped develop much better cross-unit cooperation”
- “development of a new TEL strategy, new TEL advisory group”
- “It got the conversation started for the first time within the institution.”
- “worked as a catalyst to address TEL at the institutional level.”

As previously mentioned, the new COL Benchmarking Toolkit is built on the same underlying premise as the ACODE Benchmarks, but with a specific focus on technology-enabled learning rather than on technology-enhanced learning. Having said that, the outcomes from rigorously applying either tool would be expected to be very similar, as it is the activity of gathering key members of staff together within the institution, around a common set of indicators, and having the conversation, that builds a new sense of corporate awareness. Therefore, the lessons from the ACODE example, provided above, may well be applicable to those applying the new COL Benchmarking Toolkit.

### Undertaking a Benchmarking Activity

Benchmarking is perhaps the most elaborate form of external referencing that institutions can undertake and typically consists of focused improvement through relationships with a benchmarking partner or partners (internally and externally), but it can also include comparing elements of practice against publicly available information and market intelligence (TEQSA, 2019). It is a journey that starts with a self-assessment based in evidence, not opinion.

Therefore, two critical factors need to be in place for a successful benchmarking activity. First, because HE institutions are reasonably large organisations, rarely does an in-depth knowledge of what is happening across the many and varied departments within an institution reside in just one place. That being the case, it is important that the resultant view be collectively established by having representatives from a range of departments undertake the benchmarking activity; specifically, ask those who might have knowledge, or access to the appropriate evidence, to be the ones involved.

This leads us to the second critical factor, which is that any rating of one’s position, as described in the PIs, needs to be evidence based and not just based in opinion, as evidence is what will be required when the quality agency comes to your institution and asks, “Where is your proof?” For example, PI 4 in Domain 2 of the COL toolkit (as seen in Figure 16.2) states, “The strategic plan for TEL is supported by adequate financial provisions.” It may be easy to agree to this in principle, but what evidence can be provided that this actually is the case?
Generally, such evidence might include a statement in the university’s financial plan or budget that is explicitly earmarked with the same words that appear in the strategic plan. This may not always be the case, so what other evidence might be used? There might be statements within departmental plans that reference the strategic plan and have an internal budget line established for this. If these things are not present, then it is difficult for an institution to say, hand on heart, “This is fully in place.”

Any good benchmarking tool will generally have explicit procedures for how best to conduct an activity contained in its documentation. For example, the COL Benchmarking Toolkit suggests the following six-step process:

1. A nominated department representative will first undertake an individual self-assessment of the benchmarks.
2. The departments typically represented would include those from IT, the central learning and teaching units, assessment and evaluation and/or support units, representatives from the schools/faculties, a library representative and possibly someone from the finance or planning department.
3. Those involved would generally be the main stakeholders for each benchmark.
4. The nominated individuals come together and share their self-assessments with each other to then form a collective view or agreed stance.
5. It may well be that different departments are contributing to most or all of the benchmarks, while others may only be involved in one or two.
6. Once a consolidated stance is established, this is then used as the initial position.

More details about how these procedures can be applied may be found in the COL Benchmarking Toolkit. Needless to say, whether one is looking to use the COL benchmarks or the ACODE Benchmarks, generally the organisations themselves are keen for these tools to be used and can be contacted if more information is required on how to undertake a benchmarking activity.

**Conclusion**

There is clear evidence that benchmarks and benchmarking activities have value and importance for continuous improvement and quality assurance in diverse settings. The focus on TEL is now mission critical for most higher education institutions to ensure quality in the delivery of courses and programmes. The use of a benchmarking tool, as outlined here, can help improve practice by supporting a better understanding of the operational systems and processes present within an institution. Benefits found by institutions undertaking benchmarking include:

- the identification of strengths and weaknesses — for planning and priority setting;
- an improved understanding of strategic and operational requirements;
- a recognition of areas of achievement;
- the generation of ideas and a reinvigoration of practice, through the development of strategies for improvement in areas of need.
It is now in the hands of the reader to look to establish the best ways of improving their pursuit of technology-enabled learning, and one might hope that the application of a benchmarking tool, such as the COL Benchmarking Toolkit, will serve to help them meet this end.

References


