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InSights

Issues and perspectives relevant to the development of an approach to the accreditation of initial teacher education in Australia based on evidence of impact

A paper prepared for the Australian Institute for Teaching and School Leadership

Stephen Dinham
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University of Melbourne
May 2015

Initial Teacher Education

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Introduction and purpose

The ultimate worth of any initial teacher education program is judged on the basis of the collective impact of its graduates on student learning.

> **Teaching teachers is certainly among the most demanding kinds of professional preparation: teacher educators must constantly model practices; construct powerful learning experiences; thoughtfully support progress, understanding, and practice; carefully assess students' progress and understandings; and help link theory and practice. (Darling-Hammond, Hammerness, Grossman, Rust & Shulman, 2005, p. 441)**

There is widespread acceptance that the quality of the teacher is the biggest in-school influence on student achievement. While decades of research has given a clear picture of what good teaching looks like, research has also shown that teacher quality varies widely, and more so within than between schools (Cochran-Smith & Zeichner, 2005; Dinham, 2008a; Hattie, 2009; Rowe, 2003).

Wright, Horn, and Sanders have noted (1997, p. 57):

> **… the most important factor affecting student learning is the teacher … The immediate and clear implication of this finding is that seemingly more can be done to improve education by improving the effectiveness of teachers than by any other single factor.**

Ensuring a quality teacher in every classroom is essential in terms of equity and improving the life chances of every young person. It also has wider social, political and economic ramifications. While factors such as socio-economic status (SES) and family background can each have moderate to large effects on student achievement (Hattie, 2009, pp. 61–63), these are not life sentences.

Thus, the major challenge in improving teaching lies not so much in identifying and describing quality teaching, but in developing structures and approaches that ensure widespread use of effective teaching practices in order 'to make best practice, common practice' (Dinham, Ingvarson, & Kleinhenz, 2008, p. 14).

In improving the quality of teachers, teaching, and learning; the nature and effectiveness of initial teacher education (ITE) is of great importance, although this alone is not sufficient. If the effectiveness of teachers and teaching are to be improved, it is necessary to address issues of quality and performance at every key point of leverage – the quality of those entering ITE programs, the quality of such programs, the quality of university-school partnerships and professional experience, the quality of induction and support for beginning teachers, the quality of on-going supervision and professional learning for teachers, the quality of school leadership - in an integrated approach (Dinham, 2008c; Teacher Education Ministerial Advisory Group, 2014: vii), rather than relying on 'quick fix' solutions found wanting elsewhere or simplistic, unreliable measures such as setting minimum Australian Tertiary Admission Ranks (ATARs) (Dinham, 2013b, p. 93).

The recent Teacher Education Ministerial Advisory Group (TEMAG) report *Action Now: Classroom Ready Teachers* in its 'Key Directions' called for:

An overhauled national accreditation process for initial teacher education programs … [with] Full program accreditation contingent upon robust evidence of successful graduate outcomes against the [Australian] Professional Standards [for Teachers]. … [and]

Strengthened accreditation requiring providers to demonstrate that program design and delivery is underpinned by solid research and includes measures of program effectiveness (2014, p. vii).

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In its response to the TEMAG report's findings and recommendations, the Government gave responsibility to the Australian Institute for Teaching and School Leadership (AITSL) for enhancing and assuring the quality of ITE programs in Australia and for ITE program providers to provide evidence that their graduates develop the knowledge and skills needed to be successful in the classroom, or 'classroom ready'. In light of the above directions endorsed by the Australian Government, an *evidence of impact* approach will be integral to such an enhanced system for ITE program accreditation.

The best proxy for the quality of an initial teacher education program is the impact it has on candidate and graduate teacher performance.

The best proxy for the quality of teacher performance is the impact it has on student learning.

An overhauled national accreditation process for initial teacher education programs … [with] Full program accreditation contingent upon robust evidence of successful graduate outcomes against the [Australian] Professional Standards [for Teachers]. … [and] Strengthened accreditation requiring providers to demonstrate that program design and delivery is underpinned by solid research and includes measures of program effectiveness (2014, p. vii).

The paper serves as a stimulus to discussion concerning the identification of the sorts of evidence required to demonstrate the quality and effectiveness of ITE programs and the means to measure the impacts of such programs on teacher preparation in order to make an overall judgement about program quality for the purpose of granting ITE program accreditation.

On-going concerns with initial teachers education (ITE) programs and emerging solutions[1]

There have been consistent concerns over teacher pre-service education for decades (Dinham, 2006; Labaree, 2004). The basic model of university or college coursework plus practice teaching rounds in its various manifestations has been found wanting (Hattie, 2009, pp. 109-112). Despite attempts to rectify this situation, only a minority of beginning teachers in Australia rate themselves as being 'well' or 'very well' prepared when they begin full-time teaching (Australian Education Union, 2009). An international study by Dinham and Scott found similar findings in New South Wales, England, Canada, USA and New Zealand (see Dinham & Scott, 2000; Scott, Stone, & Dinham, 2001; see also US Department of Education, 2011).

In Australia, there has been, on average, one major state or national enquiry into teacher education every year for the past 30 years. Inevitably and unfortunately, 'Each inquiry reaches much the same conclusions and makes much the same recommendations, yet little changes' (Dinham, 2006, p. 1; 2014a). *Action Now: Classroom Ready Teachers* (TEMAG, 2014) is the latest in a long line of such inquiries and reports but in this case, there appears greater will for substantive change.

Darling-Hammond and Baratz-Snowden (2005, p. 37) provide a succinct summary of the concerns over ITE:

> **In the recent past, traditional teacher preparation often has been criticised for being overly theoretical, having little connection to practice, offering fragmented and incoherent courses, and lacking in a clear, shared conception of teaching among the faculty. Programs that are largely a collection of unrelated courses and that lack a common conception of teaching and learning have been found to be feeble agents for effecting practice among new teachers.**

However, in response:

> **Beginning in the late 1980s, teacher education reforms began to produce program designs representing more integrated, coherent programs that emphasise a consistent vision of good teaching … The programs teach teachers to do more than simply implement particular techniques; they help teachers to think pedagogically, reason through dilemmas, investigate problems, and analyse student learning to develop appropriate curriculum for a diverse group of learners. (Darling-Hammond & Baratz-Snowden, 2005, p. 37)**

1 This section is drawn mainly from Dinham (2013a).

There has been growing recognition that teachers need to be able to assess or 'diagnose' individual student's learning and provide appropriate 'prescriptions' or interventions for improvement i.e., to be clinical, evidence-based, interventionist practitioners in the nature of health professionals (National Council for Accreditation of Teacher Education, 2010; McLean Davies, et al., 2013). Teachers have been told for decades that they need to cater for individual student differences and to 'personalise' learning, but generally they have not been shown or taught how to do this in effective ways (Hattie, 2009, p. 198).

Darling-Hammond and Baratz-Snowden (2005, p. 43) have noted that successful clinical teacher education programmes exhibit the following characteristics:

- clarity of goals, including the use of standards guiding the performances and practices to be developed;
- modelling of good practices by more expert teachers in which teachers make their thinking visible;
- frequent opportunities for practice with continuous formative feedback and coaching;
- multiple opportunities to relate classroom work to university coursework;
- graduated responsibility for all aspects of classroom teaching and
- structured opportunities to reflect on practice with an eye towards improving it.

Such an approach seeks to address the criticisms outlined previously and goes far beyond the traditional notion of sending the least experienced teachers to the most 'difficult' schools in some form of 'baptism by fire' or 'apprenticeship', equipped only with a limited 'toolkit' of teaching and classroom management strategies.

Alter and Coggshall (2009, p. 3) have provided a useful overview of what they see as the five key characteristics of a clinical practice profession more generally:

1. *Centrality of clients:* Clinical practice involves the direct observation and treatment of patients or clients.
2. *Knowledge domains:* The work of clinical practice professionals is highly complex, requiring general and specialised knowledge and skills as well as theoretical, practical and technical understanding are not possessed by lay people.
3. *Use of evidence and judgement in practice:* In clinical practice professions, determining the best course of treatment requires knowing an individual client (through observation, questioning and other diagnostic or evidence collection techniques) as well as knowing what research has shown to work with other clients in similar situations.
4. *Community and standards of practice:* Clinical practice professions form a professional community that monitors quality, distributes knowledge and creates standards of practice. Professionals and professional organisations, including training institutions, are held accountable to these standards of practice.
5. *Education for clinical practice:* Prior to being granted full access to practice, clinical practice professionals must successfully complete rigorous academic and practical training. Candidates must learn to work effectively with clients, obtain a high degree of knowledge, and understand how to use evidence and judgement in practice, and comprehend and value the standards of their respective professional communities.

(It should be noted that there is some resistance amongst educators to the use of the term 'clinical' (as there is to 'pedagogy', in some cases). In the context described here clinical practice should not be taken to mean diagnosing deficiency in students, i.e., a deficit model. It means being able to expertly assess the learning development of every student, both their strengths and weaknesses, at a point in time and to provide constructive feedback and personalised strategies to move their learning forward (Dinham, 2008b). Likewise, it is not intended that the word 'client' is advocated for use in respect of students, as the above discussion refers to clinical practice generally. This term too has negative connotations for many educators.)

Effective initial teacher education: A variable evidence base

Despite the conclusions drawn above by Darling-Hammond and Baratz-Snowden (2005) concerning the overarching characteristics of successful or effective ITE programs, the area remains contested, especially at the level of operational detail, with debates often concerned more with program structure – undergraduate or graduate entry, length of program, traditional versus alternative pathways, funding, time in schools - than with program quality or impact on matters such as teacher recruitment and retention, graduate teacher effectiveness and student learning.

Cochran-Smith and Zeichner concluded from a major study into teacher education conducted for the American Educational Research Association (2005, p. 29):

> **Studies comparing the effectiveness of various kinds of traditional and alternative teacher education programs and 4-year versus 5-year programs in relation to a variety of outcomes generally provide conflicting findings about the efficacy of different forms of teacher preparation and do not enable us to identify the specific program features that are related to the achievement of particular outcomes. Across the studies, there is a lack of information about the programs, about the teachers who enter the programs, and about the places teachers teach after program completion. These omissions, together with the vague criteria often used to assess teaching, limit the value of these studies in helping us understand the relative impact of different kinds of alternative and traditional programs on aspects of teacher quality and student learning.**

A further difficulty in evaluating program impact lies in the early teaching experiences of ITE program graduates. Periods of casual or emergency teaching, short term contracts or gaps in employment may well result in the 'deskilling' of beginning teachers. This often fragmented and disjointed beginning to teachers' careers can also be compounded when they encounter unsupportive and in some cases demoralised experienced teachers and negative school cultures, characterised by expressions such as 'forget everything you've learned at uni', 'don't expect too much and you won't be disappointed', and 'we tried that in 1975 and it didn't work' (Dinham, 2014b, p. 13). As Zeichner and Tabachnick found (1981, pp. 7-11), the effects of university teacher education can be 'washed out' by school experience, regardless of whether it is predominantly negative or positive, making it difficult to measure the longer term impact of ITE programs.

Not surprisingly, Hattie concluded from his meta-analyses from research on the measured effects of teacher education programs on student outcomes: 'So much more is needed on this topic' (2009, p. 112).

Common features of program accreditation in education and selected Australian professions

Unlike the case with many other professions in Australia where accreditation of programs for professional preparation and processes for the certification of practitioners are controlled by the profession, i.e., the practitioners themselves through a representative body, teaching has not followed this practice.

In earlier times teacher education courses were controlled by respective state departments of education[2] and delivered through state controlled teachers' colleges and later colleges or institutes of advanced education. When responsibility for teacher education passed to universities as part of the unified national system of higher education in the late 1980s as part of the 'Dawkins reforms', universities as self-accrediting institutions developed in collaboration with key stakeholders their own teacher education courses but these were still subject to accreditation by state and territory departments of education.

With the general introduction of state/territory based teacher regulatory authorities from the beginning of this century, these assumed responsibility for accrediting teacher education programs and certifying/registering teachers. The latest phase in this development has been the formulation and adoption of 'nationally consistent' processes for both course accreditation and teacher certification utilising the Australian Professional Standards for Teachers and national 'program standards' and accreditation protocols for teacher education programs (AITSL, 2011), although some states have added their own requirements over and above these. Such processes are nationally consistent rather than truly national given that education under the Australian constitution remains a state and territory responsibility. AITSL as a body is not 'owned' or operated by practitioners in the manner of other professions nor does it have national regulatory powers. Those powers still reside with the Australasian Teacher Regulatory Authorities (ATRA) members[3]), resulting in the need for collaboration, inducement and agreement to enable national consistency.

Nevertheless, it is instructive to examine the methods and evidence used to accredit education programs in other Australian professions. Links to program accreditation processes for dentistry, engineering, health practitioners, law, medicine, physiotherapy, psychology, nursing and social work are provided in Appendix 1. A number of commonalities emerge in terms of the information required for program accreditation and the processes involved (see Appendix 2).

In considering program accreditation processes for other professions in Australia, it appears that there is a major reliance on the profession being self-regulating through such means as peer input and review (including the use of site visits by trained representatives of the profession/accrediting body) and the use of professional standards and 'clinical' placement approaches to develop and assess candidates' capabilities against these standards, prior to the granting of full practitioner or professional status.

The current approach used to accredit ITE programs in Australia does not, on the whole, compare favourably to the methods and evidence used to accredit initial education programs in other Australian professions, in the views of the recent Teacher Education Ministerial Advisory Group and this writer, who has participated in the accreditation of ITE programs on behalf of the Victorian Institute of Teaching and AITSL, the process being essentially a 'mapping exercise' of program content against the Australian Professional Standards for Teachers (Graduate) and the present program standards (AITSL, 2011; TEMAG, 2014).

2 The Northern Territory and the Australian Capital Territory previously utilised processes for teacher education and curriculum matters in South Australia/Queensland and New South Wales respectively.

3 http://www.atra.edu.au/

Evaluating initial teacher education (ITE) programs

Michael Feuer has noted (in Feuer, Floden, Chudowsky & Ahn, 2013, p. vii):

> **Public concern for the effectiveness of teacher preparation programs has sparked renewed interest in the attributes of evaluation systems used to gauge their quality. There are many such systems currently in place, with different purposes and consequences, and a growing need to clarify their advantages and drawbacks as the basis for developing new and innovative approaches.**

Increasingly, the methods used to evaluate teacher education programs are going one major and challenging step further; the consideration of the impacts ITE graduates have upon student learning. Worrell and associates comment (Worrell, Brabeck, Dwyer, Geisinger, Marx, Noell & Pianta (2014, p. 3):

> **One fortunate outcome of this renewed focus on teacher education programs is the attention being paid to the creation of valid and efficient tools to assess that teaching force and teacher preparation. Recent scholarship has highlighted three methods - value-added models of student achievement, standardized observation protocols, and surveys of performance - that can be used by teacher education programs to *demonstrate that the candidates who complete their programs are well prepared to support student learning.* [Emphasis added]**

As Feuer, et al. have noted in respect of teacher preparation programs (TPP) (2013, p. 1):

> **Many aspects of the relationship between teacher preparation and instructional quality are not fully understood, and existing approaches to TPP evaluation are complex, varied, and fragmented. Designers and consumers of TPP evaluations could benefit from clear information about the purposes, effects, strengths, and limitations of current evaluation approaches and from guidance for designing and using future evaluations.**

This section considers some of the strengths and weaknesses of existing approaches to the evaluation of teacher education programs before considering principles for effective ITE program evaluation. Finally the three broad approaches outlined by Worrell, et al. (2014) are examined.

Feuer, et al. have mapped the terrain of the current ITE/TPP 'landscape' in the US which provides a useful starting point for this discussion (2013, pp. 1-5):

- Systems for evaluating TPPs use various types of evidence - each with its particular strengths and limitations - to make inferences about the quality of the preparation experience and its role in producing employable, high-quality teachers.
- The entities that evaluate teacher preparation programs in the United States have developed evaluation systems with different purposes, consequences, advantages, and disadvantages.
- TPP evaluations serve three basic purposes - holding programs accountable, providing consumer information to prospective TPP students and their potential future employers, and supporting program self-improvement.
- Designers of evaluation systems should take account of the incentives those systems create and the consequences of their uses.

Feuer, et al. then provide a number of principles or a framework for thinking about a TPP/ITE program evaluation (2013, pp. 5-8):

Chief among these principles is *validity*, i.e., the requirement that an evaluation system's success in conveying defensible conclusions about a TPP should be the primary criterion for assessing its quality. Validity refers both to the quality of evidence and theory that supports the interpretation of evaluation results and to the effects of using the evaluation results; the consequences of evaluation matter. … Addressing a sequence of questions can help evaluators decide on the approaches that are best suited to their main purposes.

1. What is the primary purpose of the TPP evaluation system?
2. Which aspects of teacher preparation matter most?
3. What sorts of evidence will provide the most accurate and useful information about the aspects of teacher preparation that are of primary interest?
4. How will the measures be analysed and combined to make a judgement about program quality?
5. What are the intended and potentially unintended consequences of the evaluation system for TPPs and education more broadly?
6. How will transparency be achieved? What steps will be taken to help users understand how to interpret the results and use them appropriately?
7. How will the evaluation system be monitored?

Feuer, et al. (2013, pp. 84-88) provide a comprehensive overview of the perceived strengths and limitations of commonly used measures of TPP/ITE quality with the various measures grouped in typical linear fashion:

- Admission and recruitment criteria.
- Quality and substance of instruction.
- Quality of student teaching experience.
- Effectiveness in preparing candidates who are employable and stay in the field.
- Success in preparing high-quality teachers.

Worrell, et al., writing on behalf of the American Psychological Association (APA), considered the utility of three broad sources of data for assessing the effectiveness of ITE programs (2014, p. 6):

a) Results of preK–12 student academic growth in academic learning as assessed by standardized tests (typically using what is called value-added assessment);

b) Teacher performance as measured by observation instruments; and

c) Surveys of teacher education program completers, those responsible for hiring and supervising teachers, and the students taught by the graduates.

These three types of data-collection methods are discussed in light of standards for technical quality (e.g. validity, reliability, and fairness) in three types of decisions:

1. Decisions about the progress of candidates in the teacher education program
2. Decisions about recommending candidates for licensure
3. Decisions about the effects of teacher education program graduates on students' achievement after completion of the teacher education program.

1. Using student[4] learning outcomes data

There are three possible sources of student outcomes data. The first are those data collected during the ITE program in respect of a candidate's teaching, the second comes at the end of such programs and the third, and perhaps more problematic data are those available when ITE program graduates have commenced teaching. Worrell, et al. have noted (2014, p. 13):

> **Although the ability of programs to obtain meaningful student learning outcome data during preparation will be limited, it is possible to obtain some indicators that can and should contribute to formative decisions about teacher candidates as they progress through the program.**

Although the ability of programs to obtain meaningful student learning outcome data during preparation will be limited, it is possible to obtain some indicators that can and should contribute to formative decisions about teacher candidates as they progress through the program.

Worrell, et al. see a number of advantages flowing from 'Initiating the process of collecting, evaluating, and making decisions using student learning data during teacher candidate training' (2014, p. 13). These include:

1. This data-based process is an overt expression of the core value that teaching is about producing measurable results for preK–12 students.
2. It provides a platform for coaching prospective teachers through data collection, evaluation, and decision making.
3. It provides program faculty with candidate effectiveness data at a point at which the information is still actionable for current candidates.
4. It provides learning outcome data when observation and interview data about candidate practices are still readily available.
5. Collecting, evaluating, and making decisions about student learning outcome data while candidates are progressing through the program should be viewed as more a design, management, and organizational commitment issue than as a cost, data availability, and capacity issue.

A problem associated with the use of standardised (or other) instruments to measure learning outcomes is the sheer diversity of both the contexts teacher candidates and newly graduated teachers experience and of the learning outcomes they are expected to achieve. Attribution of learning outcomes to a teacher candidate when there is a mentor or supervising class teacher (or more than one) is also problematic. Even delineating, articulating and calibrating/quantifying the learning outcomes are difficult, i.e., there are outcomes broader than those outlined in curriculum documents and professional standards (see *The Melbourne Declaration on Educational Goals for Young Australians*, MCEETYA, 2008). As Worrell, et al. point out (2014, p. 14), 'The body of research identifying critical learning outcomes across the full range of educators' work is currently inadequate' but equally, this is not a reason not to proceed with this work, which will in time add to knowledge in the area:

4 That is, the pupils/students of ITE candidates and graduates.

Waiting decades for the accumulation of research to identify key measures for every instructional domain is not a viable option. Teacher candidates are working with preK–12 students now, and faculty members have to make decisions about teacher candidate effectiveness and readiness to progress in the present. Faculty and administrators, state policymakers, and accrediting bodies must all make decisions about the merits of programs. These decisions will have to be made with the best evidence that can be obtained now, rather than the evidence we might like to have had or that likely will be available in the future. (ibid) [Emphasis added]

With these caveats in mind, there are three broad stages of teacher preparation at which the data of teacher impact on student outcomes can be obtained: during *program progression*, at *program completion*, and *following program completion*.[5]

1. Program progression

Teacher candidates in ITE programs are usually subjected to continuous assessment as they proceed through a program. Assessment covers such areas as content knowledge, pedagogical knowledge, professional values and engagement and teaching effectiveness, measured through such means as course work and practicum activities and experiences.

Using professional standards and graduate outcomes as a framework it should be possible to engage in more formal progressive assessment - i.e., what is known as 'progress testing', a method of assessment increasingly used in medical education (see Schuwirth and van der Vleuten, 2012) - to measure both *performance and growth* as candidates proceed through their ITE program. It would make a great deal of sense if such measures could be developed collaboratively across universities and the development of measures, training of assessors and analysis and reporting of data undertaken with peer input and review.

In particular, a common rubric or template for specifying, informing and measuring practicum performance based upon the Australian Professional Standards for Teachers could be integral to this progressive assessment or progress testing, something advocated in the recent TEMAG review (2014).[6] Elements of progress testing could be undertaken online, particularly on entry and exit. Online adaptive progress testing is already available for school students.[7] The results of such measures of performance and growth for ITE candidates could form part of the 'Portfolio of Evidence' recommended by TEMAG (2014) as a requirement for full registration/certification at the APST Proficient level as well as partially fulfilling the requirements for a candidate's capstone experience/assessment (see later).

2. Program completion

If progress testing has been implemented throughout an ITE candidate's program from entry, these data will form a crucial part of the final assessment of performance against the specified standards and graduate attributes: 'Strong affirmative evidence that candidates are able to facilitate and enhance student learning is clearly a critical prerequisite for teacher preparation programs to recommend candidates for completion and licensure' (Worrell, et al., 2014, p. 15). At this point the emphasis on making such a judgement is probably biased more towards actual teaching performance and thus it is essential that close communication and shared understanding exists between university and practicum setting/school staff in order to facilitate valid and reliable assessments of candidates. Longer periods of final placements with higher levels of responsibility such as occurs with internships can facilitate the making of more accurate assessments and judgements in a situation more closely approximating 'real world' teaching.

5 As will be seen, there are other data about candidates that can be gathered prior to or at entry to ITE programs. This section refers to data on candidates' impact on student learning.

6 Such a common template or rubric is already in use in the Australian Capital Territory as well as in Queensland.

7 See http://product.pearsonelt.com/progress/#.VUFyXhDW7Ak

3. Following program completion

Worrell, et al. acknowledge (2014, p. 15):

Assessment of new teachers' impact on student learning is arguably the most critically needed type of data to engage in a cycle of evaluation and continuous improvement for teacher preparation programs. It is also, unfortunately, the most difficult data to obtain.

Assessment of new teachers' impact on student learning is arguably the most critically needed type of data to engage in a cycle of evaluation and continuous improvement for teacher preparation programs. It is also, unfortunately, the most difficult data to obtain.

Issues which add complexity to the task of measuring impact of graduates on student learning attributable to their ITE program include the following:

- Some graduates do not immediately find employment on graduation; others may experience short-term contracts, casual or relief teaching and periods of unemployment as a teacher, disrupting the developmental process.
- Where beginning teachers work at a number of schools this may make the gathering and use of student achievement data problematic.
- Those who teach may well encounter varying levels of support, supervision, professional development and encouragement.
- Graduates may be geographically dispersed, including in other jurisdictions and countries.
- Beginning teachers as a cohort are employed in a diversity of schools teaching a diversity of students.
- Some beginning teachers will be teaching 'out of field', including in subjects such as secondary maths and science.
- Some may teach at grade levels for which they have not been prepared, e.g., primary teachers in secondary schools, junior secondary teachers in upper secondary schools.

All of the above and no doubt other factors will make the task of gathering suitable student achievement data logistically difficult and financially costly. Whilst individual ITE providers will want to remain in contact with their graduates and survey them in various ways and collect other data, *it makes sense for reasons of validity, cost and logistics for individual providers to work together and with bodies such as teacher regulatory authorities in collaborative partnerships using common methods and instruments, pooling data and sharing understandings.*

It would be feasible for the types of progressive 'progress testing' utilised during and at the completion of ITE programs to continue into the first year of teaching and be utilised for the purpose of certification against the Proficient level of the APST. Beyond this, universities and regulatory bodies should be encouraged to continue to conduct collaborative longitudinal studies into teachers' employment, capabilities and developmental needs, something that could feed into both ITE program development and professional development offerings for practicing teachers.

To reiterate, there are sound reasons - cost-sharing, sharing expertise, instrument quality, quality assurance, validity, data pooling, to name a few – why the development, implementation and analysis of the various measures of teacher performance and impact on student learning should be undertaken collaboratively. Worrell, et al. note (2014, p. 16):

> **In most circumstances, given the complexity of the task and the logistical challenges, assessing the impact of new teachers on student learning will be beyond the resources of teacher preparation programs working in isolation. The viable solutions appear to be primarily dependent on partnerships with state education agencies or, in some cases, with large school districts, as well as other teacher preparation programs in the state.**

This does not of course preclude further and wider collaboration, such as national – desirable in a country with the population of Australia – international, or even with other professions.

2. Using standardised observation protocols

Any assessment of ITE candidate teacher performance needs to include observation of teaching practice in situ as well as of professional interactions in school and other settings. Observation is not only about judgement of performance but should have a major developmental function through feedback interactions between the ITE candidate and others such as mentor teachers, principals and university faculty.

A key issue is how best to structure the means to assess candidates' teaching performance and how then to structure and provide this feedback, as we know that teachers receiving formative evaluation of their teaching has a large effect size ($d = 0.90$) as do specific strategies such as the use of micro-teaching ($d = 0.88$) in respect of student learning (Hattie, 2009, p. 297).

Professional teaching standards and associated graduate attributes should be integrated into and inform such measures. It would also be advantageous if these measures could be both standardised and collaboratively/uniformly applied across similar ITE programs, a point raised previously.

Worrell, et al. have noted (2014, pp. 19-20):

> **The use of standardized observations, if conducted validly, reliably, and fairly to measure those classroom interactions that impact student learning, is a direct and effective mechanism for focusing on teachers' behaviours. …**
>
> **Using well-developed standardised tools is preferable in most circumstances to a highly customized approach in which every teacher preparation program, classroom, school, or district develops a tool on its own for which there is little comparative data and incomplete or absent validity evidence.**

Worrell, et al., then go on to pose three key sets of questions to ensure valid, reliable and fair use of such observations. The authors stress that such standardised measures do not supplant other forms of feedback (2014, pp. 20-22):

1. Is the observation instrument well standardised in terms of its administration procedures?
2. Does the observation instrument include reliability information and training criteria?
3. Is there evidence for an association between observation data and desired student outcomes?

Worrell, et al., (2014, p. 21) are critical of most assessment protocols for the observation of teaching that are either 'home-grown' or 'off the shelf' due to their lack of psychometric soundness, with the exception of a few instruments such as the *Classroom Assessment Scoring System* (CLASS)[8] and the Framework for Teaching (FFT). [9]

8 http://teachstone.com/the-class-system/

9 https://danielsongroup.org/framework/

Such observational instruments of teaching performance should be part of and be congruent with the 'progress testing' of performance in academic coursework advocated previously and should continue from entry to the ITE program, throughout the program, at the completion of the program and following program graduation and entry to teaching (mentor teachers, supervisors and principals in schools could use the same instruments and frameworks used for ITE candidates to judge and improve the performance of beginning and more experienced teachers). Such progressive assessment of teaching performance would be advantageous in a range of ways in that it could:

- build a data-driven approach to program design and improvement
- track the growth of competence for individual candidates
- track group performance year after year and conduct tests of program innovations and elements provide accreditation agencies information pertinent to program quality
- help align training experiences to outcomes
- build program coherence around a common language and lens for practice
- assign teacher candidates early and preventively to appropriate training experiences (Worrell, et al., 2014, pp. 21-22).

3. Using surveys of teacher performance

Surveys are a more commonly used method of attempting to assess teacher performance. These can include (Worrell, et al., 2014, p. 23):

a) surveys of teachers about their satisfaction with their training and their perceived competence in job performance,

b) surveys of employers (e.g., principals and school district personnel) asking about the performance of teachers from the various institutions that serve as teacher providers, and

c) surveys of students of graduates asking about their teachers' performance and behaviour.

Surveys of teachers and employers are in turn more commonly used than surveys of students (see below).

Individual ITE providers may utilise their own surveys of candidates and graduates. External researchers and bodies can also conduct their own surveys. Self-efficacy instruments of teachers' performance and capabilities are often utilised and are based upon stated graduate outcomes and professional standards for teachers, often at point of completion. A problem lies with the varying use, reliability and validity of such instruments and the fact data are rarely aggregated into larger more useful data sets. There is a perhaps understandable reluctance for individual ITE providers to be identified and for comparisons between providers to be made, although there are potential advantages associated with such benchmarking. Surveys following graduation are more expensive and logistically difficult for reasons outlined previously but could also add value.

Concerns have been raised with principals' ratings of teachers' ability, with some evidence to suggest principals are better at distinguishing teachers at the 'bottom' and 'top' than in the 'middle' of performance distributions, where most teachers would be expected to be placed (Jacob & Lefgren, 2008). Obviously this can be more problematic in larger schools.

Student surveys of teaching performance are now common in tertiary education settings where students are asked to rate their course, the subjects they undertake, aspects of the teaching they receive, their own learning and the resources and infrastructure available to them, through using a university-wide common instrument (Richardson, 2005). These data thus already exist in respect of respect of ITE programs but the comments made previously concerning the capacity or reluctance to share, aggregate and thus analyse data across ITE providers remain pertinent.

Student surveys of teacher performance in schools are less common, less valid and more contentious overall. Studies suggest that student ratings of teachers are not sufficiently reliable to be used for decision-making below grade 3 but have greater potential utility in upper primary and secondary grades. Students in those grades are better placed to make comments about teachers' expectations, their treatment of and relationships with students of different backgrounds and abilities and more general aspects of schooling, teaching and learning such as school climate and student engagement, although students may not have a sufficient frame of reference or knowledge to make judgements about teachers' content or pedagogic knowledge (see Goe, Bell & Little, 2008).

An allied concern is the level of preparedness of teachers in schools to seek and utilise feedback or ratings from their students. There is some evidence that when students have the opportunity to provide their teachers with regular feedback and see that this is acted upon, the quality and the utility of such feedback increases (see the *Tripod Student Surveys* developed at Harvard University in 2001 by Donald Ferguson and validated by the *Measures of Effective Teaching Project* (MET) in 2013).[10]

There are good reasons to persist with the further development of and greater utilisation of student ratings of teacher candidates' and beginning teachers' at various points of teachers' ITE training and beyond. Worrell, et al. note (2014, pp. 25-26):

In the absence of student achievement data, student surveys may take on additional significance, as they are more highly correlated with student achievement than are surveys completed by other raters.

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compare favourably to the methods and evidence used to accredit initial education programs in other Australian professions, in the views of the recent Teacher Education Ministerial Advisory Group and this writer, who has participated in the accreditation of ITE programs on behalf of the Victorian Institute of Teaching and AITSL, the process being essentially a 'mapping exercise' of program content against the Australian Professional Standards for Teachers (Graduate) and the present program standards (AITSL, 2011; TEMAG, 2014).

10 See http://tripoded.com/about-us-2/

Issues and directions for measuring the quality and impact of ITE programs in Australia

The ultimate worth of any initial teacher education program must be judged on the basis of the collective impact of its graduates on student learning. There an old saying about teaching: 'I taught them but they didn't learn'. It would be equally concerning to say: 'We taught them how to teach but we don't know if their students are learning'.

As noted, in order to assess the effectiveness of initial teacher education programs in Australia it is essential to measure the quality of teaching and impact of teacher candidates at every key point of leverage (Dinham, 2008c), including selection, progression, program completion and post-completion teaching (Worrell, et al., 2014, p. 4).

As Worrell, et al. concluded from their review of measures to assess and evaluate ITE programs (2014, p. 6):

> **Given the importance of teachers and teaching, a focus on assessment and evaluation of teachers' performance, both for purposes of improvement and for accountability, should be no surprise. Teacher preparation programs need to demonstrate with evidence that teacher education makes a difference in preK–12 student learning. The need for evidence of teacher impact arises from the ethical and professional responsibility of teacher education programs to assure the public that they are preparing effective teachers for … [our] schools.**

Measures of quality and impact of ITE programs: desirable options

A broad finding of this review has been that:

> **Current and recent methods of assessing the quality and impact of ITE programs in Australia do not meet either the standards of ITE program evaluation 'best practice' noted in the literature nor of general standards for the accreditation of initial programs in other Australian Professions.**

Issues and principles relating to measuring the quality and impact of ITE programs highlighted in this review include:

1. The practice of **peer review** in the development and evaluation of ITE programs and in the certification of practitioners lags behind practices in other Australian professions.
2. A '**culture of evidence'** (CAEP, 2015a, p. 2) has been gradually strengthening in Australian schooling under the influence of such measures as standardised/external testing and 'evidence-based practice' but has been slower to develop in the field of ITE.

3. Fundamental to building a culture of evidence in education is that of measuring the **impact of teaching** on the learner, whether that learner is a school student, teacher candidate or practicing teacher.

4. A key finding from the research experience in the field to date has been of the benefits that can be accrued through the development, implementation and analysis of valid and reliable measures of ITE program impact and candidate/graduate performance through **collaboration** between ITE providers and other relevant bodies. Such **standardisation** of measures can address issues associated with local variations as well as providing larger data sets for higher level analysis.

5. Validity – 'good evidence' (CAEP, 2015a) - is the basis of judging quality and performance and is not the result of a single measurement but a combination of appropriate measures and **multiple sources of data** which include professional judgements from relevant stakeholders. Validity, reliability and fairness are fundamental in making such judgements (Worrell, et al., 2014, pp. 27-28).

6. Thorough **training** of developers and users of measures of quality and impact and those analysing data is necessary if **better judgements and decisions** for ITE program improvement can be made.

7. A general principle derived from the research literature is the need to measure ITE candidate and graduate **performance and growth** at various points of the **developmental continuum**, from selection and entry to ITE programs through to completion and beyond.

8. **Registering teacher candidates** on entry as recommended in the TEMAG report Action Now (2014) will facilitate such data gathering during and across ITE programs and subsequently.

Rather than a series of recommendations on the types of measures of quality and impact of ITE programs in Australia and measures of the performance of candidates and graduates that should be employed, what follows is a consolidated series of desirable options drawn from the extant contemporary research literature cited in this paper. The options of measures that can be obtained and analysed to make judgements about the quality and impact of ITE programs can be selected from in the manner of a suitable menu. As the Council for the Accreditation of Educator Preparation in the US has noted (CAEP, 2015c, p. 1):

> **No single instrument can address all the content, complexity and difficulty contained in standards. Instead the cumulative assessments administered by the EPP [Education Program Provider] should represent the range of standards..**

No single instrument can address all the content, complexity and difficulty contained in standards. Instead the cumulative assessments administered by the EPP [Education Program Provider] should represent the range of standards.

For each of the options suggested below, underpinning principles of peer/collaborative development and review, validity, fairness, and the sharing and utilisation of data are givens.

The series of options canvass the development of and impact on student learning of teacher candidates and graduates of ITE programs. These measures as seen as the most powerful proxy for ITE program quality and impact.

Some of the data will be gathered/provided by individual universities, some by universities working in collaboration, some by ATRA members, some by schools and employing bodies and others such as 1.1, through national initiatives.

This is followed by concluding comments on the accreditation of ITE programs.

1. Measures of quality of teacher candidates prior to ITE programs

1.1. Common national ite program entry assessment/screening tool - to be collaboratively developed with optional/mandatory utilisation by ITE providers (similar in conception and operation to the widely used Graduate Medical School Admissions Test (GAMSAT) developed by ACER [11]). Undertaken by applicants to teacher education programs addressing AITSL literacy and numeracy benchmarks and attributes predicting tertiary success and suitability for teaching. Includes open-ended responses on opinions of/reasons for teaching (see Bowles, Hattie, Dinham, Scull & Clinton, 2014). To be used by ITE providers in conjunction with ATAR (undergraduate ITE programs), Grade Point Average (GPA) (graduate ITE programs) and interviews and auditions where utilised for the purpose of selection. Not pass/fail but to augment selection processes. Data used for purpose of selection, accreditation, internal research and pooled nationally for higher level analysis.

1.2. Data on ITE selection procedures and ITE applicant profiles - (demographic, SES, academic) both successful and unsuccessful to be provided in ITE program accreditation documentation and pooled nationally. Demand and supply data for courses at ITE providers used for individual purposes and supplied to state and national authorities for teacher workforce planning.

2. Measures of quality and of teacher candidates on entry to/during ITE programs

2.1. Progress testing (Schuwirth and Van Der Vleuten, 2012) – incorporating literacy and numeracy benchmarks and based upon APST, individual subject and course outcomes and graduate attributes. Developed collaboratively by ITE providers for similar courses and implemented at the end of each year of study to track and measure development and growth. Data used by ITE providers for program evaluation and development purposes and benchmarking against similar programs at other providers nationally and possibly internationally. Data utilised for ITE program accreditation purposes and pooled for research purposes.

2.2. Assessment rubrics (candidates) – developed, possibly collaboratively and standardised, for use in individual subjects and for placements by candidates (see 2.4), mentor teachers, principals and university staff. Professional development, training, benchmarking, validation required. Based on APST, graduate attributes, subject and program outcomes. Used for guiding and measuring candidates' growth, self-assessment, and measuring subject/program impact/value adding (for guidance on using rubrics for accreditation see CAEP, 2015c).

2.3. Assessment rubrics (for students of candidates) – developed collaboratively, standardised and utilised for use by ITE candidates to measure the impact of their teaching in placement situations. Can include use of student learning objectives (SLO) (see Worrell, et al., 2014, p. 16). Data utilised by individual ITE program providers for candidate assessment, program evaluation purposes and pooled for wider research purposes.

11 See http://www.gamsat-ie.org/

2.4. Standardised observation protocols for placement teaching performance assessment – for candidates as noted under 2.2. Templates/rubrics developed collaboratively, standardised, based on APST (graduate) standards and applied nationally for all placements. Basis for assessment of, feedback to and development of candidates. Data used for program evaluation and development and accreditation. Augments progress testing regime.

2.5. Data on achievement and progression – of candidates, including 'drop-out' and 'failure' rates, grade point averages, performance. Utilised for program evaluation, development and accreditation and pooled nationally for research purposes.

2.6. Data on where and how candidates undertake placements – including structural arrangements with schools/centres; SES, regional/remote/ indigenous etc. Utilised by ITE providers, pooled for higher level analysis.

2.7. Surveys of performance (Worrell, et al., 2014, P. 23) – of candidates, developed collaboratively, standardised. Completed by key stakeholders: candidates, university staff, mentor teachers, principals.

2.8. Portfolio of evidence (TEMAG, 2014) – developed collaboratively, standardised, based upon APST (see Dinham & Scott, 2003). Utilised to assess candidate performance, growth, quality and impact of ITE program for evaluation and accreditation purposes. Used by potential employers for appointment. Can be merged/comprise a key element of the Australian Qualifications Framework (AQF) capstone requirement.[12]

2.9. University-based subject/program evaluations – pre-existing instruments for subject teaching and candidate learning outcomes. Utilise optional, specific questions for teacher education based on APST, program outcomes, graduate outcomes, where possible. Results of Faculty initiated, University required and external (e.g., TEQSA[13]) program evaluation processes. Used for evaluating subjects, quality of university teaching, program evaluation and development, and program accreditation purposes.

3. Measures of performance and impact of teacher candidates at conclusion of ITE programs

3.1. Final progress testing – including benchmarks/measures of literacy introduced utilised previously, collaboratively developed, based upon APST (Graduate) and program, graduate outcomes. Data shared with collaborators/benchmark partners, more widely. Used for program evaluation and development, accreditation.

3.2. Completion of portfolio of evidence/AQF Capstone - data to inform candidate performance assessment, program evaluation/development and accreditation evidence.

3.3. Surveys of performance (Worrell, et al., 2014, P. 23) – of graduates, developed collaboratively, standardised, completed by key stakeholders: graduates, university staff, mentor/supervising teachers, principals/employers.

3.4. External surveys of graduates – Course Experience Questionnaire (CEQ)[14], other purpose-built measures. Data to inform program evaluation/ development and accreditation evidence.

12 http://www.aqf.edu.au/wp-content/uploads/2013/06/AQF-Explanations.pdf

13 http://www.teqsa.gov.au/

14 http://www.graduatecareers.com.au/research/start/agsoverview/ctags/ceqo/

4. Measures of quality and impact of teachers in the first year(s) of teaching

4.1. Employment rates, types and destinations of graduates - including out-of-field teaching: gathered by ATRA authorities, results of Australian Graduate Survey[15]; data shared nationally for policy, research, workforce planning.

4.2. Results of certification against APST (Proficient) – results shared with respective ITE provider, inform program evaluation and development, indictor of ITE program quality and impact.

4.3. Assessment rubrics (for students of beginning teachers) – developed collaboratively, standardised and utilised for use by ITE graduates/beginning teachers to measure the impact of their teaching on student learning. Can include use of student learning objectives (SLO) (see Worrell, et al., 2014, p. 16). Data utilised by individual ITE program providers for program evaluation, development and accreditation purposes and pooled for wider research purposes.

4.4. Surveys of performance - (Worrell, et al., 2014, p. 23) – of graduates/ beginning teachers, end of first year and beyond, developed collaboratively, standardised, based on APST (Proficient), completed by key stakeholders (acknowledging the issues of diversity of contexts of teaching, training for raters, reliability): beginning teachers, mentor/supervising teachers, principals/ employers. Data to inform program development, program accreditation, provision of future professional learning for teachers.

4.5. On-going surveying/monitoring of ITE graduate teachers – employment status, location and type, professional development needs, self-efficacy against APST, longer term view of program quality.

15 http://www.graduatecareers.com.au/research/surveys/australiangraduatesurvey/

Conclusion: Improving the accreditation of ITE programs

There is a strong emphasis running through the above on measuring and demonstrating the quality and impact of ITE programs and providing evidence of this as part of the accreditation/reaccreditation process, much of it involving the measurement of ITE candidate and graduate teaching performance, including the impact of teaching on student learning.

There is a need to build a 'culture of evidence' (CAEP, 2015a) in the development, accreditation, evaluation and modification of ITE programs and to move from inference to evidence in making decisions about ITE program quality and impact, including the collaborative use of value added models of achievement, standardised instruments and protocols and surveys of performance (Worrell, et al., 2014; Dinham, 2014b).

There is a need to utilise more fully peer and stakeholder review and feedback in such decision making across the phases of selection and entry to ITE programs, during ITE programs, at the conclusion of ITE programs, and into the early years of teaching.

As well as a much greater focus on the measurement of ITE program impact, more rigorous and authentic methods of program accreditation including site visits, inventories and interviews with key stakeholders need to be utilised. Such means are commonly employed in other Australian professions and increasingly in the accreditation of ITE programs internationally (CAEP, 2015b).

This review has highlighted some of the difficulties and limitations of such approaches and methods, but this is not a reason not to begin the process of building such capacity, data and understanding. As noted, the ultimate worth of any initial teacher education program is judged on the basis of the collective impact of its graduates on student learning and this is what we must strive to measure and then to use such measures for program development and improvement.

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Appendix 1: Program accreditation peocedures in selected professions in Australia

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Appendix 2: Common features of course accreditation in selected professions (Drawn from organisations listed in Appendix 1)

Professional bodies:

- Are usually nationally based.
- Are operated by the profession/practitioners on behalf of the profession, i.e., are member based, independent and self-regulatory.
- Protection of the public, stakeholders and the public interest are central concerns.
- High standards of education, training and professional practice are the means to protect, assist the public.
- Develop mission statements, professional standards, graduate attributes, codes of conduct, guidelines for professional knowledge, professional practice.
- Benchmark and review their standards, frameworks, processes and procedures against national and international best practice.
- Programs/courses accredited as a form of quality assurance and to stimulate review and improvement.
- Monitor and work with education providers in their field.
- Certify practitioners: decide who can practice, those who can't, and those who have certification withdrawn or conditions of restricted practice applied.
- Represent the profession and its practitioners in consultations with other regulators/ bodies.
- Have reciprocal recognition of accreditation and certification with comparable international bodies to facilitate both quality of programs and mobility of graduates.

Courses/programs[16] of study:

- Individual faculties/schools clearly articulate and communicate the attributes and capabilities candidates should exhibit on graduation in order to meet standards for the profession.
- Curriculum content, teaching and learning methods and assessment are clearly linked to specified threshold learning outcomes which in turn result in the acquisition and development of the prescribed attributes required for professional practice (typically knowledge, understanding, values, skills).
- Teaching and learning methods require and encourage candidates to actively engage with the profession.
- Experiential learning occurs through clinical programs, internships, fieldwork, workplace experience and forms of community placements/service.
- Training/certification/recognition is provided by the body for those practitioners supervising/mentoring experiential/workplace learning.
- Minimum periods of academic study for particular programs (and sometimes elements of programs) are specified.
- The curriculum is freely disseminated.
- Recognition of prior learning in available where relevant and appropriate.
- The university/faculty/school provider has internal processes to plan, implement and review the program.
- Peer review (practitioners, other providers) is utilised in the development and self-evaluation processes.
- The faculty/school/provider consults widely with the profession and in environments where graduates will work.
- The university/faculty/school/provider takes responsibility for the pastoral care, well-being and career assistance of its candidates.

Academic staff:

- There are appropriate numbers and profile of staff in terms of qualifications and experience and full-time/part-time status to enable candidates to meet the standards of the program/profession.

Research and teaching:

- There is a close relationship between research and teaching in program design and content.
- This nexus reflected in the curriculum and in assessment methods.

16 Course and Program tend to be used interchangeably across the professions as are the terms unit/subject.

Assessment of students:

- There is publishing of methods and criteria for assessment.
- Methods are employed to ensure validity and reliability of assessment methods/tasks.
- Formative and summative feedback is provided to students.
- Assessment facilitates and requires students to demonstrate they have met standards.

Program and subject evaluation:

- Regular subject and program/course evaluation procedures are in place monitor curriculum, quality of teaching and student learning.
- Concerns about the program and its components are acted upon.
- Measures and information about the attributes and capabilities of graduates are used to inform course and subject evaluation and development.

Resources, infrastructure, governance:

- The University/faculty/school/provider has adequate resources/infrastructure fit for purpose of developing professional attributes and program/course outcomes.
- Physical facilities for staff and students enable teaching, study, research, engagement.
- Learning environments are reviewed and updated regularly.
- Information/Communication technologies are utilised for teaching, administration, communication with staff and students to enable effective course delivery and support for teaching, research, and engagement.

Program accreditation[17]:

- In most professions seeking and obtaining accreditation is mandatory but in some (e.g., law) a faculty/school is not obliged to seek accreditation but may do so voluntarily.
- Accreditation by the relevant external, independent body occurs when: a new course is proposed; 'major changes' are made to a currently accredited course; current accreditation is expiring and re-accreditation is sought.
- An accreditation assessment may also be initiated as a result of public or other complaints or concerns about a program and/or its graduates.
- The accreditation process is generally based upon three broad criteria:
  - The teaching and learning environment, infrastructure and resources.
  - The outcomes, structure and content of the program/course.
  - The quality assurance framework and processes.

17 Assessment of programs is typically referred to as *accreditation.* Assessment of practitioners for satisfactory completion of programs/registration is usually referred to as *certification*, but this usage does vary across the professions.

- Rules and frameworks for accreditation processes are formulated and employed by the professional body.
- It is typical for accreditation to involve the provision of mandatory materials, information and evidence.
- There may be different/additional requirements for re-accreditation for previously accredited programs/courses.
- A suitable panel of trained/certified assessors is drawn upon and appointed to conduct the accreditation.
- There are means to ensure confidentiality of proceedings and avoidance of conflict of interest.
- Accreditation is normally conducted against a set of standards and an accreditation framework. Common elements include:
    - Checking to ensure all documentation is complete and correct.
    - Pre-site meetings/communication as required.
    - Visitation of the faculty/school by the assessment team and meetings with appropriate people, including academic and professional staff, students, graduates, employers and other stakeholder representatives.
    - Physical resources and facilities inspected.
    - Validating information provided.
    - Assessment of program(s) completed.
    - Providing a draft report containing recommendations and requirements which the faculty/school/provider responds to.
    - Responses from the faculty/school/provider considered by the panel.
    - Panel makes a recommendation on accreditation to the parent committee/board/body concerned.
    - Conditions may be placed on the terms of the accreditation in which case follow-up by the accrediting body is specified.
    - The cost of accreditation is borne by the faculty/school/provider.
    - Accreditation is typically for a period of five years although ‘major changes’, however defined, usually require reaccreditation if these changes are to be made within this (usually) five year period.
    - Results of accreditation outcomes are made public.

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