

Connecting research and teacher education : quality enhancement for ITE Partnerships

PERRY, Emily <<http://orcid.org/0000-0003-3413-1159>>, BOYLAN, Mark <<http://orcid.org/0000-0002-8581-1886>>, BOOTH, Josephine and COLDWELL, Michael <<http://orcid.org/0000-0002-7385-3077>>

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Connecting research and teacher education

Quality enhancement for ITE Partnerships

Information

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Connecting research and teacher education

Audience	Initial teacher education (ITE) providers, including higher education institution (HEI) and primary, secondary and special schools; Education Workforce Council (EWC) Accreditation of Initial School Teacher Training Committee; the Higher Education Funding Council for Wales (HEFCW); the Universities and Schools Council for the Education of Teachers Cymru (USCET Cymru); Estyn; consortia; professional associations and teaching unions; central government education departments; other interested parties.
Overview	A team from Sheffield Hallam University was commissioned by the Welsh Government to support developments in research-informed teacher education. The quality enhancement tool was developed by this team: Professor Mark Boylan, Mike Coldwell, Dr Emily Perry and Dr Josephine Booth.
Action required	None – for information only.
Further information	Enquiries about this document should be directed to: Initial Teacher Education Reform Branch Workforce Strategy Unit The Education Directorate Welsh Government Cathays Park Cardiff CF10 3NQ Tel: 0300 062 5484 e-mail: ITEducationAddysgGA@gov.wales
Additional copies	This document can be accessed from the Welsh Government's website at learning.gov.wales
Related documents	<i>Teaching tomorrow's teachers</i> (2015) <i>Criteria for the accreditation of initial teacher education programmes in Wales</i> (2017)

Mae'r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

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Section 1: The quality enhancement tool

1. Introduction

1.1 Overview

As part of the Welsh education reform programme, the relationship between research and teacher education has been identified as an important component for improving Welsh education and meeting the aspirations of the new Welsh Curriculum. The new ITE accreditation criteria (Welsh Government, 2017) seek to contribute to meeting the challenge to move towards matching internationally excellent practice in research-rich teacher education in a form appropriate to Welsh contexts.

Quality enhancement is a change process in which ongoing evaluation is embedded and used to inform development. It is informed by both theory based (Weiss, 1997; Rogers, 2008) and realistic evaluation methodologies (Pawson & Tilley, 1997) adapted for improvement planning. The quality enhancement tool presented here is designed to support ITE partnerships to meet the ITE accreditation criteria and engage in ongoing quality enhancement. It will support providers and potential providers to:

- set aims and goals
- articulate change mechanisms and identify resources needed and actions to take
- use both external and institutional evidence to review the current situation
- plan the monitoring of progress.

The intended users of the tool are those responsible for planning and leading ITE programmes in ITE partnerships. The tool will be used most effectively through a process of dialogue and collaboration with all stakeholders within institutions and with school and other external partners. This collaboration with schools is essential in relation to areas where responsibility is shared for the quality of ITE.

This tool is comprehensive and thorough and so will take time to use. It is recommended for use with the two priority areas that have been identified at whole system level (see 1.3) and with locally generated priorities for enhancement. For other areas with lower priorities, other forms of self-evaluation and quality enhancement may be more appropriate.

1.2 Background

Concern about PISA scores in 2009 and 2015 as well as nationally generated data on system outcomes, has led to the reform of the education system in Wales. A series of reviews focussed on different aspects of the education system have been completed (e.g. Donaldson, 2015; Furlong 2015; OECD, 2017). A key recommendation is that teacher education and professional development will have to change in order to "serve the needs of Wales" (Furlong, 2015). Two reasons for this are that Initial Teacher Education (ITE) in Wales is inadequate in terms of quality; including both the quality of entrants and the provision, and that the school system does not adequately prepare young people for the future.

Internationally, increasing the use of research-based skills and knowledge in ITE is recognised as a way to raise the quality of teaching and learning, both in ITE itself and in schools, thereby improving student outcomes (BERA-RSA, 2014). Other education systems have experienced success in using this approach to ITE. For example, the Finnish approach to teacher education, regarded as one of the best in the world, has high expectations for teachers with a minimum requirement for a Master's degree, selective entry and competitive pay. Research has for many years formed an important part of Finnish ITE with the concept

of teachers as researchers central to their programmes, students undertaking a research-based dissertation for their Master's degrees and being encouraged to contribute to research on teaching through their careers (Toom et al., 2010).

Research-rich teacher education extends the concept of a research-rich school and college environment (BERA-RSA, 2014) to teacher education providers. One feature of such an environment is that it supports teacher educators' research literacy and offers access to facilities and resources that support sustained engagement with research. Developing the capacity of teacher educators in this way supports their ability to design teacher professional learning around a complex understanding of professional practice supported in turn by teacher engagement with research and in research activity (Furlong, 2013; Ellis & McNicholl, 2015).

1.3 Focus areas

The tool is exemplified through considering two areas for enhancement. These have been identified in various reviews of Welsh provision as priorities to address to support the development of a research-rich, evidence-based system, particularly in relation to ITE.

The areas of focus in this quality enhancement tool are:

1. The need to build up research capacity in education faculties in Higher Education and specifically amongst teacher educators;
2. The need to integrate theory and practice within programmes including through students engaging in systematic enquiry.

It is important that ITE providers and potential providers note that the use of this tool is not a substitute for appropriate quality enhancement and assurance across all aspects of provision. Estyn's *'A self-assessment manual for initial teacher training providers 2014'* as well as the *Criteria for the accreditation of teacher education programmes in Wales, 2017* are recommended in this regard.

1.4 Enhancing quality: purposes and values

The quality enhancement tool is intended to support evidence informed planning, implementation and evaluation for improvement. Key components for this are consideration of future outcomes, the present situation, the context and actions to be taken. However, important too is a consideration of the overall purposes of change initiatives. These overall purposes can be considered in terms of aims and values.

For Wales, enhancing research capacity amongst faculty and developing research-rich teacher education are important outcomes of the current reforms. However, their importance rests on how they can support the vision of improving the quality of the teaching workforce in Wales and developing 'teachers of tomorrow', who must be experts in not only teaching subjects but also in teaching students to learn how to learn. Such a teaching workforce will embody and demonstrate a new form of professionalism amongst Welsh teachers as set out in 'Teaching Tomorrow's Teachers' (Furlong, 2015). The Welsh reform programme is underpinned by values that inform this vision. These include seeking to enhance the professionalism of teachers and teacher educators, to increase the importance of using evidence and knowledge in an informed and critically reflective way, and to value power of partnership between all stakeholders.

However, these aims of enhancing teacher professionalism and improving the quality of the workforce in turn are a means to a more important aim- that of improving the education of young people in Wales (Welsh Government, 2014). The new Welsh curriculum sets out a vision for developing:

- ambitious capable learners
- enterprising creative contributors
- ethical informed citizens
- healthy confident individuals (Donaldson, 2015).

A congruent approach to developing teacher educator capacity will take account of these values. For example, if an important value is professional autonomy then this will be reflected in the extent to which teacher educators are encouraged to engage in capacity building activities. It is important also to consider the commitment to bilingualism that is embedded in the Accreditation criteria for ITE for all ITE providers (Welsh Government, 2017).

1.5 Organisation of the document

Following this introduction, in the next part the enhancement tool is introduced in a general form without specific content. Following this the tool is applied to each of the two priority areas – developing research capacity and integration of theory and practice within ITE programmes. Three appendices are provided. Appendix 1 provides an example of application of the tool for the development of teacher educator research capacity, Appendix 2 is a template to support use of the tool and Appendix 3 provides further detail on the sources for the approach taken in the evaluation/change literature.

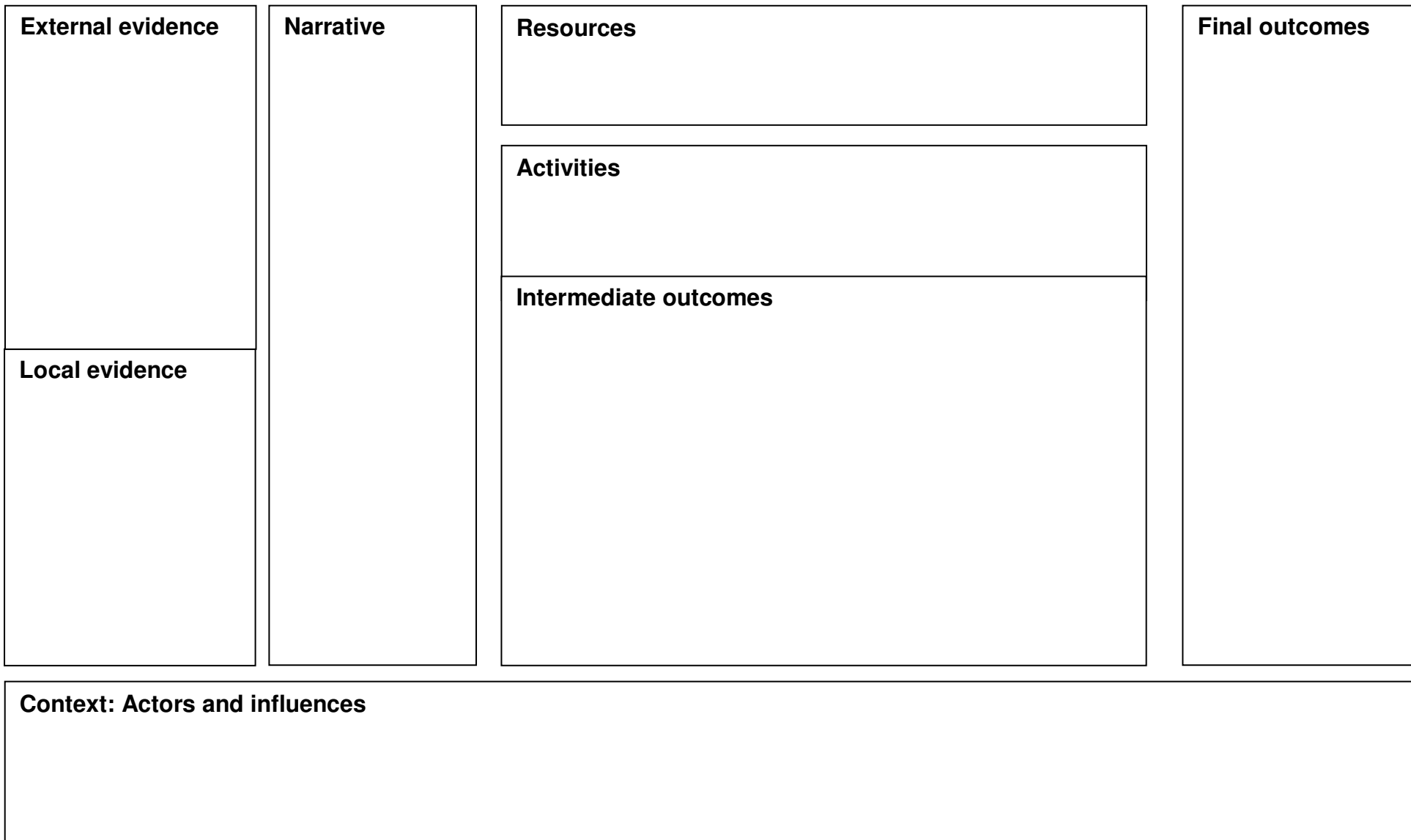
2. The quality enhancement tool

2.1 Overview

The quality enhancement tool integrates theory-based, realistic evaluation and values-based evaluation. Further information about how the tool is informed by evaluation models can be found in Appendix 3. Use of the tool supports the development of an improvement model (Figure 1). It is intended that it will be completed by a group of colleagues through discussion and reflection. By working through the prompts, reviewing evidence and considering the specific focus areas, planning teams should populate a model for each focus area. As focus areas are likely to contain a number of themes, models may be populated for each theme before bringing them together in a single enhancement plan.

The next part of the document provides general prompts and activities that could apply to any area for development. These support reflection on the current situation and plan for future improvements in relation to each of the components. Then the model is exemplified in Section 2 through more detailed guidance in relation to two priority areas for development, with further, more focussed prompts, questions and sources of evidence to support planning as well as potential outcome indicators and impacts. The tool is intended to be flexible, adaptable and extendable to other areas for development by further adaptation of the prompts and questions as needed.

2.2 The quality enhancement model



2.3 Using the model

For each part of the model a series of reflective questions and/or suggested activities is described below. The model is intended as a flexible tool and so there will be an iterative approach in which different parts of the model are developed through overlapping and reflexive processes. For example, as intended outcomes are specified, this may lead to new questions about what evidence is currently available, or the formulation of outcomes and impacts may lead to further articulation of underlying values.

In Part 2.4, the tool is detailed in a generic form. The different components of the tool are described in the following order:

- Present
 - External evidence
 - Local evidence
 - Context
 - Narrative
- Future
 - Final outcomes
 - Intermediate outcomes
- Actions
 - Change mechanisms
 - Resources
 - Activities

2.4 The components of the model

Present

The current situation is considered by reviewing external and local evidence to develop a narrative informed by context.

External evidence

External evidence refers to the knowledge base relevant to the focus area. This knowledge includes scholarship, research, comparative studies and policy documents. Reviewing this external evidence supports an assessment of the current situation and informs actions to enhance quality.

What is the knowledge base in relation to the focus area for development and improvement?

How does the knowledge base inform possible change mechanisms?

Local evidence

Local evidence refers to data and experiential knowledge developed locally within the ITE partnership.

What evidence do you have in relation to the current situation, particularly in relation to measures identified when outcomes were considered?

What data is available? Where are there gaps in the evidence base and so what additional data needs be collected?

Context

The context is considered in terms of actors and influences which support improvement planning.

Actors may be individuals, groups, networks or organisations and also may include artefacts or social objects for example teaching standards, criteria or documents which are relevant to the quality enhancement focus. Groups may be formally identified or less well defined, for example, professional communities.

What are the key actors in the system relevant to the area for quality enhancement?

Are there other or different actors that need to be enrolled or formed in support of the change process?

Influences are significant issues or forces that might either enable or inhibit change. These may be beliefs, or organisational cultural, social and economic factors relevant to different system levels.

What whole system, regional, organisational and local issues will be important influences on quality enhancement either supporting or inhibiting desired outcomes?

How will these influences act separately and work together to enable or inhibit change?

What 'levers' are there in the system which can direct/redirect forces?

Narrative

The narrative draws together the external and system evidence, and the knowledge of context into a short summary of the current situation identifying strengths and key areas for development.

What are the key issues in the current situation in relation to the area for development?

What are the areas of strength?

What are priorities for development?

Future

In planning improvement, the most effective route is to begin by understanding what you are ultimately trying to achieve and what success will look like. The future intended situation is therefore considered first, in terms of final and intermediate outcomes.

Final outcomes

These are quantifiable outputs from activities within a defined time period. They may be reviewed as the enhancement process goes on and outcomes move from intended to actual.

What measurable outcomes would be indicators that the overall aims are being achieved?

What will the situation be like in relation to these outcomes at the end of the change process (looking up to five years ahead)?

Intermediate outcomes

The intermediate outcomes are quantifiable 'stepping stones' towards the final outcomes. Intermediate outcomes may be of two types:

- milestones towards achieving final outcomes defined using the same measures
- mediating outcomes that are necessary for longer term outcomes to be achieved, for example the introduction of a new system or process.

What are the intermediate outcomes that will show progress towards final outcomes is taking place?

How will progress towards desired outcomes be tracked?

Is there any additional evidence needs to be gathered? How will this be done?

Actions

Actions are the means to move from the starting point, as described in the narrative, to the intended outcomes. Actions consist of resources and activities¹ and, behind these, the underlying change mechanisms.

Change mechanisms

The change mechanisms refer to the ways that the resources and activities will lead to change. For example, whether actors are being incentivised, persuaded or compelled to change will have an effect on how the change is implemented. Change mechanisms also refer to underlying theories about why activities will be effective. Systemic issues such as feedback loops, possible tipping points and emergent outcomes may be considered here.

How will the inputs and activities lead to the identified outcomes and impacts?

What is the theory of change that informs the allocation of resources and the intended activities?

How might contextual factors – influences and actors – mediate change mechanisms?

Resources

The resources are financial and non-financial inputs which are required for the quality enhancement plan. The more specifically these are stated the more likely it is that a credible, achievable plan will be implemented.

What financial resources will be needed?

What human resources will be needed?

What other materials, artefacts or processes will be needed?

Who or what will be responsible for these resources and ensuring they lead to action?

Activities

The activities are actions undertaken using the resources to lead to the outcomes and aims identified.

What activities are needed to achieve the outcomes?

Who or what will undertake these activities?

How will these activities be sequenced?

How will they work together?

¹ Sometimes in theory of change models these appear as 'inputs' and 'outputs'

Section 2: Developing specific areas

Area 1: Developing capacity among university-based teacher educators to engage in research and contribute to research-rich initial teacher education

In this section, specific prompts and questions are provided in relation to the area of developing capacity amongst teacher educators to engage in research and contribute to research-rich initial teacher education (for brevity this is referred to as 'developing teacher educator capacity'). These should be used alongside the above generic prompts and questions as appropriate, which are not, in general, reproduced in this section. By following these prompts and discussion points, a version of the model in Figure 1 for Area 1 should be populated which shows how the HEI and its partners will implement and evaluate action to develop teacher educator capacity (see Appendix 1 for an example).

The new Welsh ITE accreditation criteria specify the following routes to developing teacher educator capacity:

- Improve qualification of teaching educators in HEIs: Teaching staff have a qualification at a higher level than the accreditation level of the course on which they are teaching; if not, they should be working towards it (Welsh Government, 2017, p.16)
- Develop research activity of HEI teacher educators so that HEI lecturers and tutors should normally be research active and take lead roles in assimilating, conducting, publishing and supervising research (p.17)
- Partnerships will be required to evidence how HEI teaching staff are supported to be research active and to show how their research will inform the development of their ITE programmes (p.17)
- Teacher educator professional development: HEI staff should be active in professional development programmes relevant to their role within ITE (p.17)

A1.1 The present

External evidence

Research on teacher educators' professional roles, their relationship to research and professional development needs is a growing area of scholarship. In addition to the BERA-RSA study cited earlier (BERA-RSA, 2014), a selection of exemplar texts is included in this section that can:

- be a focus for reflection on how current capacity is similar and different to other contexts
- inform possible actions to move towards the aims
- identify potential obstacles
- provide conceptual tools to inform the collection of local evidence.

The texts are intended as foci for discussion and reflection and so initial prompts to support this in the form of questions are provided. The value of reflecting on these particular texts will be enhanced by on-going consideration of a wider range of scholarship on teacher education.

Text 1: Furlong, J. (2013). *Education and anatomy of a discipline: rescuing the university project*. London: Routledge.

This provides an important historic overview of the role of universities in the academic discipline of teacher education. Chapters 6 and 11 are of particular importance in relation to developing teacher education research capacity. Chapter 6 surveys the diversity of educational research and argues there is value in this diversity. Thus, worthwhile educational research should not be judged solely by REF-type indicators of international quality. This can be extended to consider the type of research and scholarly activity that is appropriate for professional teacher educators. Chapter 11 makes a case for refreshing University based teacher education for professional education of teachers.

What sorts of educational research do staff in the HEI or partnership engage in and with?

What type of research is valued institutionally?

What are the distinctive contributions that universities can and should make to teacher education?

Text 2: Lunenberg, M., Dengerink, J., & Korthagen, F. (2014). *The professional teacher educator: Roles, behaviour, and professional development of teacher educators*. Springer Science & Business Media.

This accessible text (126 pages) includes a review of 20 years of literature on the role of the teacher educator. The review is organised by considering the following roles: teacher of teachers, researcher, coach, curriculum developer; gatekeeper and broker. Critical features and challenges related to enacting and developing these roles are discussed, as are professional development approaches. The book includes an annotated list of reviewed literature.

What is the balance of the six different types of role performed by teacher educators in the specific HEI that is part of the ITE partnership?

How does this vary across individuals?

Text 3: Griffiths, V., Thompson, S., & Hryniewicz, L. (2010). Developing a research profile: mentoring and support for teacher educators. *Professional Development in Education*, 36(1-2), 245-262.

This paper reports a study of teacher educators' relationships to research at two English Universities (one a pre-92 and one a post-92 HEI). The challenge for teacher educators of developing research identities is reported and enabling and constraining factors are considered. Implications and lessons for departments of teacher education are discussed.

How relevant are the lessons and implications identified for the ITE partnership under consideration?

Text 4: Geerdink, G., Boei, F., Willemse, M., Kools, Q., & Van Vlokhoven, H. (2016). Fostering teacher educators' professional development in research and in supervising student teachers' research. *Teachers and Teaching*, 22(8), 965-982.

In the Netherlands, due to policy developments, there has been increased emphasis on teacher educators' research engagement. Four approaches to supporting teacher educators' professional development are considered. Some of the common features that enable professional learning in research across these four approaches are: The opportunity to exchange and discuss experiences with colleagues; a connection between the (research or research development) activity's content and form; and the teacher educator's daily duties and activities; the use of theory; activity led by a senior expert researcher; external pressure; and time to do study tasks and to meet.

*How far are these common features already present in professional development activities for teacher educators?
Which would be appropriate to enhance or adopt?*

Text 5: Swennen, A., Jones, K., & Volman, M. (2010). Teacher educators: their identities, sub-identities and implications for professional development. *Professional development in education*, 36(1-2), 131-148.

Teacher educators' identities can be considered as comprising four sub-identities: schoolteacher, teacher in Higher Education, teacher of teachers (or second order teacher) and researcher. In addition, teacher educators are sometimes considered as generic teachers. The sub-identities are modelled as nested within each other with the development of an identity as a researcher resting or informed by other identities.

*What is the balance of different sub-identities that teacher educators in the specific ITE partnership have?
How far does this vary across individuals? How is this related to activities engaged in?*

In summary, what lessons for enhancement can be taken from the external evidence?

Local evidence

Local evidence relates to four key issues: qualification, research activity, research informing programmes, and teacher education professional development, as well as other issues identified locally as important in relation to developing capacity. The evidence needed will relate to the measures identified for knowing whether outcomes have been achieved.

The table below summarises some possible sources of evidence for each of the key issues. This table can be adapted for local contexts.

Table 1 Examples of sources of local evidence

Qualification	<ul style="list-style-type: none"> • Qualifications audit (possible sources, CVs, HR records, specific data gathering and mapping to courses) • Teacher educators' views about and orientation to qualification development (survey, meetings, appraisal)
Research activity	<ul style="list-style-type: none"> • Information about research activity and scholarship already held, for example, publication • Survey/audit of research activity and scholarship • Teacher educators' views on research activity from surveys/meetings • Annual appraisal/performance management processes • Web profiles • Membership of professional bodies
Research activity informs ITE programme	<ul style="list-style-type: none"> • Programme documents/content documents • Survey/audit of research activity and scholarship
Teacher educator professional development	<ul style="list-style-type: none"> • Institutional PD activity (education and more generic) • Applications for CPD funding • Engagement with FHEA and SFHEA processes • Appraisal/performance management – review of engagement in PD including current engagement in higher degrees • Identification of strategic PD needs related to programme development plans

What other sources of evidence are relevant to the intended aims and outcomes?

What evidence do you have in relation to the current situation, particularly in relation to measures identified when outcomes were considered? Where are there gaps in the evidence base?

How will this evidence be gathered stored and used to inform enhancement plan is implemented?

In summary, what is the key local evidence that should be recorded in the enhancement model?

Context

In considering context, important actors and influences are identified. To identify important actors it may be helpful to develop a network diagram or map that visually shows relationships between different actors (see McCormick et al., 2010). It may be helpful to think in terms of internal actors and external actors. An important choice, in this case, is how the boundary between internal or external is defined. For example, internal may mean inside an HEI department or the HEI as a whole or alternatively within an ITE partnership. It is important to focus on the significant actors for the issue at hand rather than a full mapping of the system.

If the focus is at a departmental level then internal actors are likely to be: organisational groups within departments, specific leadership roles, teacher educators, resources (for example, time allocated for research and scholarly activity), programme documents, potentially physical spaces. Examples of external actors may be other groups or parts of the HEI, school partners, pioneer schools, regional consortia, Estyn, External Examiners, professional and research associations and learned societies, grant awarding bodies.

*What are the key actors in relation to developing research capacity?
How can these be enrolled or encouraged to support the aims and achievement of improving qualifications, research activity and so on?
Are there other or different actors that are not yet part of the internal or external system that could support research capacity? If so how do they need to be enrolled or formed to support of the change process?*

Influences might either enable or inhibit quality enhancement and intended change. Important influences to consider at a national and organisational level include the potential implications of the Teaching Excellence Framework and the Research Excellence Framework.

*What local institutional processes, policies or beliefs are relevant to developing capacity?
Are there other areas that are the focus for quality enhancement that are relevant? Do these add to or conflict with the intention to develop research capacity?
What is the relationship, if any, to Research Informed Teaching agendas in the HEI?
What regional forces or influences are important, if any?
How does the university's response to the Stern review of REF influence developing teacher educator research capacity?
How will these influences act separately and/or work together to enable or inhibit change?*

Narrative

The narrative draws together the external and system evidence, and the knowledge of context and the system, into a short summary of the current situation identifying strengths and key areas for development. Based on the evidence identified and analysis of context, undertaking a 'S.W.O.T' (strengths, weakness, opportunities and threats) exercise may also support the development of the narrative, and these categories can potentially provide a structure for the narrative.

What are the key issues in the current situation in relation to the area for development?

Are there any terms or categories that need defining to ensure all involved have a common language, particularly around the meaning of research and scholarly activity?

What are the areas of strength in relation to the four areas that are indicators of teacher educator research capacity?

What are priorities for development?

In summary, what is the present situation or starting point in relation to developing capacity amongst university-based teacher educators to engage in research and contribute to research-rich initial teacher education?

A1.2 The future

The accreditation criteria include a number of indicators that are markers of capacity of teacher educators in relation to research-rich ITE. These are:

- Teacher educator qualifications

'Teaching staff should have a qualification at a higher level than the accreditation level of the course on which they are teaching; if not, they should be working towards it.' (Welsh Government, 2017, p.16)

- Teacher educator research activity

"All HEI lecturers and tutors should normally be research active and take lead roles in assimilating, conducting, publishing and supervising research." (Welsh Government, 2017, p.17)

- Linking research activity to ITE programmes

HEI Teacher educators' research informs the development of their ITE programmes." (Welsh Government, 2017, p. 17)

- Teacher educator professional development:

"HEI staff should be active in professional development programmes relevant to their role within ITE" (Welsh Government, 2017, p.17)

Final outcomes

'Developing capacity' is a broad final outcome. Breaking this into measurable components will support enhancement planning by identifying goals which can be realised.

Considering the indicators listed above and/or an expanded list generated by the planning team:

What would be measures of these indicators? For example, in relation to qualifications what does this mean in terms of number of teacher educators with or studying for doctorates and Masters level qualifications? How might research activity be demonstrated? What type of research activity, and so on? Accreditation: is five years a suitable timescale for planning in relation to these various indicators?

How will achievement of outcomes be evaluated? In summary, what are the intended final outcomes?

Intermediate outcomes

Intermediate outcomes are steps on the way to achieving intended outcomes.

What would be interim outcomes in relation to the indicators and measures that have been identified?

Are there other milestones or mediating outcomes that need to be achieved, for example, establishing a small grants research fund that would enable research activity, or developing a teacher educator specific professional development programme?

For the different indicators, and considering the overall timescale, should outcomes be specified as yearly or more or less frequently?

How will progress be monitored? How will this inform revising the quality enhancement plan?

In summary, what are the intermediate outcomes?

A1.3 Action

Change is the result of action. Planning for action using the model requires considering resources, activities and the change mechanism.

Change mechanisms

In considering change mechanisms, refer back to the external evidence for wider knowledge about engagement in research by teacher educators and academics.

To what extent will teacher educators be incentivised, compelled or persuaded to change by the activities planned above? For example, what is the role of appraisal or performance management mechanisms?

How might the local contextual factors influence the change mechanisms and so the activities?

Do the underlying change mechanisms that inform activities and resource allocation accord with the values underpinning educational reform in Wales?

In summary, what are the change mechanisms that will lead to the realisation of outcomes and aims?

Resources

Resources will be required to take action. It is important that resources are specified in sufficient detail for planning. One resource may be the time of those responsible for actions, for example, line managers of teacher educators. It is likely financial resource may be needed, for example to support research conference attendance. New or revised artefacts, material objects and processes may also be needed, for example revisions to appraisal or performance management documents, or guidance to highlight research.

What financial, human and other resources are currently in the system in relation to developing research capacity?

Are there any actors identified in consideration of context that are or could be useful resources?

What additional financial, human or other resources are needed?

Who is responsible for allocating and monitoring resource use?

In summary, what are the inputs into the quality enhancement plan?

Activities

Using the resources identified, consideration should be given to the activities needed to lead to the intended outcomes. Below is a list of possible activities that could be undertaken to enhance scholarship, some of which may be already happening or are planned; the list is not intended to be exhaustive:

- Auditing research and scholarship activity
- Providing guidance on the breadth of the meaning of research and scholarship in teacher education
- Recruitment of research active teacher educators at a range of levels to lead and support others to develop capacity
- Research mentoring schemes, with external support if there is a lack of internal capacity
- Writing for publication groups and courses
- Forming research groups or integrating teacher educators into existing ones
- A conference fund with criteria that support beginning researchers to access funds as well as more experienced researchers
- Scholarship champions in teacher education teams
- Support for doctoral study - support with fees and time
- Individual scholarship plans
- Small scale research grants to cover non-pay costs such as travel and transcription costs
- Funds for collaborative projects, including working with partners
- Teacher education seminar series, drawing on key external speakers, and supporting HEI staff and partners to speak about their own research activity
- Review/adjust appraisal and performance management forms and processes to encourage engagement in research
- Temporary responsibility allowances to build leadership and integration of research

In considering actions to take it can be useful to consider:

- relatively small adjustments to existing process or practices
- more substantial changes to a process or practice
- new initiatives and activities

Further questions to identify activities are:

What activities will lead to achieving outcomes in relation to teacher educator qualifications?

What activities will lead to desired increases in research activity?

What activities will ensure that teacher educator research activity informs ITE programmes?

What activities will enable engagement by teacher educators in appropriate professional development?

Do these activities related to the four areas – qualifications, research activity, research informing programmes and CPD – need to be sequenced and if so how and how will they work together?

In summary, what activities will lead to enhancement?

Area 2: The need to integrate theory and practice within programmes

In this section, specific prompts and questions are provided in relation to addressing the need to integrate theory and practice within programmes.

The accreditation criteria specify the following routes to the integration of theory and practice within ITE programmes:

- Ensure programmes provide opportunities for student teachers to identify, interpret and apply educational theory and evidence to teaching practice (p.14)
- Ensure programmes provide opportunities for student teachers to engage in systematic enquiry to support professional learning and to develop research and enquiry skills, for example, through action research and/or lesson study (p.24)

The prompts provided here should be used alongside generic prompts and questions from Section 2 as appropriate, which are not, in general, reproduced in this section. It will be useful to also read the exemplification of Area 1. By following the prompts and discussion points, a version of the model in Figure 1 for Area 2 should be populated which shows how the ITE partnership will implement and evaluate action to integrate theory and practice within ITE programmes.

A2.1 The present

External and local evidence about integration of theory and practice in programmes should be reviewed to develop a narrative about the present situation.

External evidence

In addition to the BERA-RSA study cited earlier (BERA-RSA, 2014), a selection of exemplar texts is included in this section that can:

- be a focus for reflection on how current capacity is similar and different to other contexts
- inform possible actions to move towards the aims
- identify potential obstacles
- provide conceptual tools that can inform the collection of local evidence

As exemplars, the texts are useful foci for discussion and reflection by ITE providers and partnerships. The value of using these particular texts will be enhanced by on-going consideration of a wider range of scholarship on the integration of theory and practice in teacher education.

Text 1: Burn, K., & Mutton, T. (2015). A review of 'research-informed clinical practice' in Initial Teacher Education. *Oxford Review of Education*, 41(2), 217-233.

This review offers a historical and conceptual overview of research-informed ITE that values the interplay of different kinds of knowledge accessed and developed by beginning teachers in school and university contexts. Such programmes see both sites of knowledge and forms of knowledge as important and support students to use these to support reflection on classroom experience and their practice as teachers.

To what extent is your current programme similar to or different from the research-informed clinical practice model?

Text 2: Winch, C., Oancea, A., & Orchard, J. (2015). The contribution of educational research to teachers' professional learning: philosophical understandings. *Oxford Review of Education*, 41(2), 202-216.

This paper discusses three conceptions of what good teaching is – the teacher as craft worker, as executive technician, and a third conception that values research-based professional judgement. They argue for the importance of valuing different aspects of professional knowledge and practice: situated understanding, technical knowledge, critical reflection, practical know-how, conceptual understandings of education, teaching and learning, and the ability to interpret and form critical judgements on existing knowledge.

To what extent does your current programme and practice support the development of variously craft workers, executive technicians or research informed professional teachers?

How could it be enhanced to improve the development of the various forms of knowledge and skills needed by teachers identified in this paper?

Text 3: Toom, A., Kynäslähti, H., Krokfors, L., Jyrhämä, R., Byman, R., Stenberg, K., & Kansanen, P. (2010). Experiences of a Research-based Approach to Teacher Education: suggestions for future policies. *European Journal of Education*, 45(2),331-344.

This paper describes the Finnish approach to developing research-based teacher education over the last 30 years. The Finnish approach combines student teachers engaging with research texts to inform their practice with an undertaking of research as part of Bachelor's and Master's theses. Programmes are structured to support systematic analysis of education, teaching is based on research, student teachers routinely practice enquiry dispositions, and students learn research skills.

How far are Finnish approaches found in current programmes and practices?

The authors claim that teachers educated in this way are not context bound; how far is current teacher education aimed at preparing teachers for a profession rather than a particular job?

Text 4: Jenkins, A. & Healey, M. 2005. *Institutional Strategies to link teaching and research*. The Higher Education Academy. URL

http://www.ipd.gu.se/digitalAssets/1345/1345048_institutional_strategies.pdf

In parallel with scholarship focused on research-informed teacher education, scholars concerned with Higher Education pedagogy in general have developed frameworks for considering research informed teaching, particularly for undergraduates, which informs wider institutional developments in learning, teaching and assessment in HEIs. Below is one model that provides a typology of different ways HE students can engage with research.

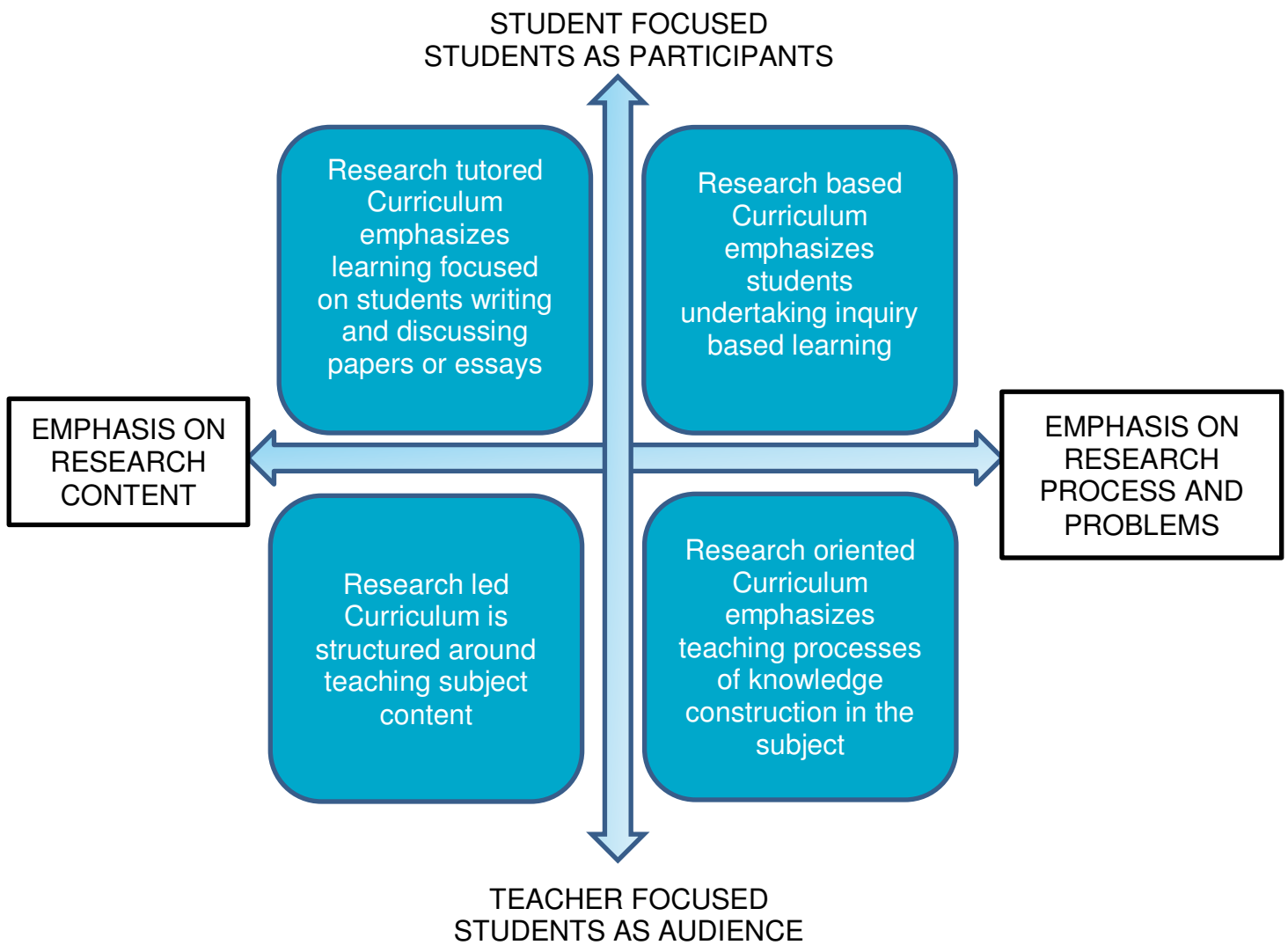


Figure 1. The nature of undergraduate research and inquiry

*How far do beginning teachers in the teacher education programme experience a research led, tutored, orientated or research based experience?
What are the opportunities for developing all these different dimensions?*

Text 5: Cajkler, W., Wood, P., Norton, J., & Pedder, D. (2013). Lesson Study: towards a collaborative approach to learning in Initial Teacher Education? *Cambridge Journal of Education*, 43(4), 537-554.

This paper describes and evaluates the integration of lesson study into ITE. Lesson study teams consisting of a school mentor, a student teacher and another teacher in the school undertook a cycle of lesson study. The research lesson developed collaboratively was taught first by the mentor and then following this taught by the student to a different group. The university tutor acted as an external expert, particularly in supporting collaborative evaluation.

What support might mentors in your school partnerships lead similar lesson study approaches?

Local evidence

Local evidence, which will relate to the identified measures for outcomes, can be gathered from programme documents and feedback from students and partners' feedback.

The table below summarises some possible sources of evidence that may be available or could be collected. This table can be developed further for local contexts.

Table 2 Examples of sources of local evidence

Programme documents	<ul style="list-style-type: none"> To what extent are links between theory and practice made in programme documents?
Accredited study	<ul style="list-style-type: none"> Are University- based learning experiences informed by theory and is research and theory integrated in the programme in a coherent way? Does success in assessments require: <ul style="list-style-type: none"> engagement with research/theory research activity (as appropriate for beginning teachers)? Do student teachers have the opportunity to engage in action research or lesson study or similar activities?
School based practice	<ul style="list-style-type: none"> In what ways are beginning teachers encouraged or required to use ideas from diverse sources? How are practice experiences graduated to allow for reflection and integration of theory and or research? Do documents and learning experiences emphasise the importance of testing ideas in different contexts and situations valued (rather than a focus on a single 'right way to teach)?
Mentoring	<ul style="list-style-type: none"> In what ways, if any, do mentor training materials encourage links between theory and practice? Do tools used for observation and feedback encourage theory/research informed conversations? In what ways (if any) are mentors involved in supporting student teacher enquiry?
Partnership	<ul style="list-style-type: none"> How far is the value of research and theory embedded in partnership agreements and practices?
Student feedback and outcomes	<ul style="list-style-type: none"> Does assessment of teachers on qualification evidence theory practice links? Do surveys of students indicate the development of research informed practitioners?

What other sources of evidence are relevant to the intended aims and outcomes?

What additional data needs be collected and how will this be collected?

It is likely that relevant data is held or recorded in a variety of different ways and for other purposes. An important further question is then:

How will data and evidence in relation to this area be collated and stored?

In summary, what is the key local evidence that should be recorded in the enhancement model?

Narrative

The narrative draws together the external and system evidence, into a short summary of the current situation identifying strengths and key areas for development. It is important that areas of strength are identified as well as areas for development. As with Area 1, it may be useful to undertake a 'S.W.O.T' (strengths, weakness, opportunities and threats) exercise may also support the development of the narrative.

What are the key issues in the current situation in relation to the area for development?

What are the areas of strength in relation to the area of focus?

What are priorities for development?

In summary, what is the present situation or starting point in relation to integrating theory and practice in programmes?

A2.2 The future

The future intended situation is considered in terms of final and intermediate outcomes.

Final outcomes

These are the quantifiable outputs from activities within a defined time period. These may be reviewed as the enhancement process goes on, and outcomes move from intended to actual.

What measurable outcomes would be key indicators that the overall aims are being achieved?

One checklist to consider in formulating outputs is to consider:

- Programme documents
- Student outcomes on accredited study (UG degree outcomes, PG grades and marks)
- School based practice
- Mentoring
- Partnership
- Student feedback and outcomes both at the end of the course and beyond e.g. progression of alumni to masters study.

What will the situation be like in relation to these outcomes at the end of the change process (looking up to five years ahead)?

Intermediate outcomes

Intermediate outcomes are steps on the way to achieving intended outcomes.

What would be interim outcomes in relation to the indicators and measures that have been identified?

Are there other milestones or mediating outcomes that need to be achieved?

For example, establishing a small grants research fund that would enable research activity, or developing a teacher educator specific professional development programme?

For the different indicators, and considering the overall timescale, should outcomes be measured yearly or more or less frequently?

How will progress be monitored? How will this inform on-going revisions of the quality enhancement plan?

In summary, what are the intermediate outcomes for each year of the plan?

A2.3 Context

The context is considered in terms of actors and influences which support improvement planning. Actors are any system components salient to the quality enhancement processes, including but not limited to HEI staff.

What are the university quality assurance and learning, teaching and assessment systems and policies that may influence integration of theory and practice in programmes?

What role do school partners have in supporting integration of theory and practice in programmes?

How far do teacher educator faculty members have the capacity to address this area for improvement?

Influences are significant issues or forces that might either enable or inhibit quality enhancement and intended change.

What is the relationship, if any, to Research-Informed Teaching agendas in the HEI?

How do institutional responses to TEF affect or influence actions to integrate theory and practice in programmes?

How will these influences act separately and work together to enable or inhibit change?

A2.4 Actions

Actions are the means to move from the starting point, as described in the narrative, to the intended outcomes, in order to achieve the aims.

Change mechanisms

The change mechanisms refer to the ways that the resources and activities will lead to change. For example, change may occur if actors are variously incentivised, compelled or persuaded to change.

How far will the onus be on individual teacher educators to integrate theory and practice and how far will this happen at a programme or partnership level?

Resources

The resources are all the financial and non-financial inputs which are required for the quality enhancement plan. The more specifically these are stated the more likely it is that change will happen.

Questions to consider are:

Will additional financial resources be needed, for example a fund for innovation projects to trial approaches to the integration of theory and practice?

What human resources will be needed, for example for new or additional mentor training in lesson study or research methods?

What other materials, artefacts or processes will be needed? For example, do observation forms need to be revised to ensure they encourage theory and practice integration?

Who will be responsible for ensuring resources lead to desired action?

Activities

The activities are actions undertaken using the resources to lead to the outcomes and aims identified. Activities, ideally, will relate to different areas of the learning experience for student teachers and systems that support this.

As with developing capacity, it is likely that activities will be of three categories with a combination of them being effective:

- relatively small adjustments to existing process or practices
- more substantial changes to a process or practice
- new initiatives/activity

Some examples of activities to support the integration of theory and practice within programmes are given in the box below.

- Reviewing and auditing current programme experience including: validation documents, teaching materials, reading lists, placement experience, assessment materials
- Revisions of placement structure and timing to provide opportunities for application of theory
- Introduction of research literacy themes to seminars and/or specific workshops
- Subject specific research informed seminars
- Researchers in related disciplines (sociology, psychology, policy studies etc.) contributing to teacher education programmes
- Linking university experience more closely to teaching experience, for example, through student assessments and ITE school-based partner activities
- Group placement models to support peer review and reflection and opportunities for activities such as lesson study
- Assessed enquiry projects linked to school improvement or other priorities
- Revisions or improvements to mentor training, including joint delivery of training with school partners working with HEI staff
- Collaborative research projects of teacher educators with mentors
- Scholarships/bursaries for mentors to engage in M level and doctoral study

- School based teacher researchers presenting on their projects to student teachers
- Revisions of observation protocols to encourage theory informed mentoring conversations
- Encourage student teachers, HEI staff and school based teacher educators to be members of professional associations and support this activity through contributions to conferences and journals, hosting of workshops etc.
- Make research engagement visible in buildings through displays and so on
- Student prizes for enquiry projects
- Staff awards or recognition for research projects
- Encourage student submissions to the TEAN STeP journal

Additional reflective questions that can support identification of appropriate activities from the list above or others are:

Which of the above activities (or others) are priorities for your partnership?

Who or what will undertake these activities?

What existing systems, practices and activities should be adjusted to support the outcomes?

What additional activities are needed to achieve the outcomes?

How will changes be sequenced to ensure an achievable and measurable progression to meeting the intermediate and final outcomes?

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Appendix 1: An example of the quality enhancement model – an example of the model on developing research capacity

<p>External evidence</p> <p>A need to define research more broadly than REF 3*/4*</p> <p>Need for structured support</p> <p>Engaging with/in research activity will require an identity shift for many. Supervising student teachers' research can help support teacher educators scholarship but this needs support.</p>	<p>Narrative</p> <p>Teacher educator identity as 'teacher of teachers' deeply rooted amongst long serving staff. Culture of research as something others do.</p> <p>Most recruited without Masters qualification and rarely with doctorates or engaged in doctoral study.</p>	<p>Resources</p> <p>Funding for doctoral fees, time/release for doctoral study. Salary costs for appointment of a Reader in Teacher Education. Small grants fund for non-pay costs of project. Staff development funds for teacher educators to engage in external networks.</p>	<p>Intended final outcomes</p> <p>After 5 years:</p> <p>All staff to have doctorates or engaged in doctoral study within 5 years</p>
<p>Local evidence</p> <p>20% of teacher education staff with PhD/EdD or studying for one.</p> <p>No submissions to REF from teacher education, but other scholarship from many staff evident but it is often not shared.</p> <p>Last year 2 members of staff attended an external conference but did not present.</p>	<p>Institutional focus on REF 4* and 3* output presents a very high hurdle for teacher educators.</p> <p>Accessing resources for research and scholarship dependent on high quality outputs.</p> <p>Many teacher educators involved in 'below the radar' innovations related to their own practice in ad hoc ways.</p>	<p>Activities</p> <p>Revise recruitment policies to make willingness to undertake doctoral research/research activity a requirement for new appointments. Modify appraisal process to highlight importance of development objectives linked to research. Establish a scheme for small research projects for teacher educators. Writing time to report on practitioner research/scholarship. Invite external seminar speakers.</p>	<p>All teacher educators to have engaged in practitioner research projects during the previous 5 year period.</p> <p>Research and scholarship project outcomes shared widely in local partnerships and beyond</p>
		<p>Intended intermediate outcomes</p> <p>Increase in number of staff with PhD/EdD or studying for one by 15% of total staff per year (increase to 35% in first year, 50% second year etc.)</p> <p>25% of teacher education staff have a 1* minimum paper for return in REF2020</p> <p>Increase in conference attendance/engagement in networks</p> <p>All staff have the opportunity to engage in a 'close to practice' research project</p> <p>Establishment of a teacher education research and scholarship group led by a teacher educator researcher publishing internationally excellent research</p> <p>Increase in number of seminars and attendance</p>	<p>All staff to regularly attend events and conferences external to the institution including 20% per year attending international conferences. Sustainable programme of seminars with contributions from teacher education staff</p> <p>Examples of Internally developed staff ready for progression to reader/assistant professor</p>
<p>Context: Actors and influences</p> <p>Drivers of teacher education provider criteria, new teacher standards, new curriculum. Changing landscape in Wales regionally and development of pioneer schools. Split between teacher educators and researchers. Stern review of REF – possibility of more staff entered. TEF – opportunity to emphasise research informed teaching as route to teaching excellence. External research and scholarship communities available to teacher educators.</p>			

Appendix 2: Template for a tabulated theory of change/improvement plan

Issue	Resource	Activity	Intermediate outcome	Final outcome	Notes inc context & change mechanism

Appendix 3: The methodology of the quality enhancement tool

Further details are provided here of the methodology of the quality enhancement tool. It conceptualises quality enhancement as a change process in which ongoing evaluation is embedded and used to inform development. It is informed by both theory based (Weiss, 1997; Rogers, 2008) and realistic evaluation methodologies (Pawson & Tilley, 1997) adapted for improvement planning. Although these two contrasting approaches have been brought together for this purpose it is important to note that there are significant methodological differences between them when used for evaluation particularly in relation to the meaning of theory (Blamey and MacKenzie, 2007). However, combining these aims takes into account the complexity of the social world i.e. that system change is likely to have these features: non-linearity; emergence; adaptation; uncertainty; change in dynamical systems; and coevolution (Walton, 2016)

Essentially, what the quality enhancement tool seeks to do is to 'reverse engineer' these approaches to evaluation. Typically, in order to undertake a theory based evaluation, the evaluator would aim for stakeholders (the programme implementer and others) to articulate the long term aims of the programme and then seek to understand how programme actions are intended to lead to these aims and what the interim steps along the way are.

Importantly, contextual factors are considered. Realistic evaluation theory (Pawson & Tilley, 1997) emphasises the importance of identifying mechanisms for change. An evaluation approach along these lines is laid out in Box 1 below.

Box 1: Evaluation approach

1. Agree vision and endpoints/impacts: developing an agreed statement (or set of statements] of "where we want to be".
2. Then move on to starting points: do we have a good picture of where we are now in relation to these end points? If not what information do we need to gather?
3. Review activities: what activities are being put in place to move from the starting point to the agreed end point?
4. Check the expected intermediate outcomes that are going to be needed along the way e.g. after six months; after a year; etc.
5. Check: how will these activities lead to these outcomes?
6. Check context: what personal, organisational, systemic factors may support or hinder the mechanisms by which the activities will lead to positive change?
7. Subsequent stages follow: review of existing evidence behind the processes and mechanisms sitting behind the theory of change, and develop evaluation issues:

- **appropriate data sources**
- **possible methodologies (exploring mixed methods; secondary analysis of sources; new primary and secondary data collection)**
- **options for timings and relationships between different data methods**

Typically, the resulting 'theory of change' is represented visually, often in a form that is described as 'logic model' (see Cooksy, Gill & Kelly, 2001). Typically in a logic model 'inputs' (in the QE tool these are referred to as resources) and 'outputs' (referred to here as activities) are described.

As a quality enhancement tool, this process is reversed with the programme of activities designed in relation to the desired outcomes, after considering the context.