

# How can edtech professionals use digital technologies to improve teacher recruitment and teacher retention (R&R)?

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## Context

The title question arose from a panel session at the recent ITTE/Mirandanet Conference, [‘Raising Digital Aspirations’](#) during which our DfE colleague, Jen Halshaw, asked conference to think about how computing technology could be deployed to alleviate some of the professional difficulties in both the initial recruitment of new teachers and longer-term career stability and satisfaction, i.e. recruitment and retention (R&R). Following the conference a discussion ensued on the MirandaLink mailing list in response to the question and a number of comments and suggestions were put forward.

This paper begins with two summary tables. The first highlights the well-known barriers and challenges to R&R and the second a summary range of responses from the online discussions. It then offers some recommendations but contextualised by a discussion of some principles that ought to guide any planned or proposed implementation of edtech to address aspects of R&R while recognising (a) that this must be at a scale sufficient to have wide impact and (b) that while there is potential in some cases for a quick start up, the benefits that might follow will take time to be revealed.

Many of the solutions suggested by our members are drawn from their practical experience and all work well in specific situations and for specific purposes. All have have positive and practical potential. (See Table 1 at end of paper). We must be a little cautious, however, about assuming that solutions that work locally for some will work at a scale sufficient to help solve professional problems that are regional or national in scope.

In addition, there are systemic challenges in education that educational technology (edtech) will not be able to fix. Some challenges such as pay and conditions, career opportunities and progression are widely regarded as crucial to the solution of recruitment and retention. We have to recognise that edtech may offer little direct traction on these.

From Table 2 (see end of paper) we can distil a list of activity areas that could be addressed, wholly or partially, by digital solutions:

1. **Recruitment focus:** raising recruitment in shortfall subjects.
2. **Retention focus:** enhance esteem of oversubscribed/underfunded subjects.
3. **Career and Accountability focus:** Maintain a record of professional development.
4. **CPD focus (1):** Online certification/qualifications in TPCK (Recruitment and Retention)
5. **CPD focus (2):** In collaboration with subject associations to develop online professional networks

### 1. Recruitment goal: raising recruitment in shortfall subjects.

Focus on those subject areas that under-recruit. This is a major weakness in the current crisis. Aim to draw meet the 'digital expectations' of new recruits who by and large will have substantial prior experience of digital media. However, solutions adopted must be relevant across the board to all aspects of the taught curriculum and will involve refreshing aspects of subject teaching. Work with [CfSA](#).

### 2. Retention goal: enhance esteem of oversubscribed/underfunded subjects.

Overlaps with the recruitment goal. However, need to focus more on the [marginalised non-core subjects](#) (see table 2,note 4). A 'reboot' of non-core subject disciplines to incorporate well-trying and well-supported support digital tools as well as to overcome the perceived marginalisation of non-core subjects (e.g. in the humanities subjects) which in turn demotivates aspiring teachers. Work with [CfSA](#).

### 3. Career and Accountability focus: Maintain a record of professional development.

Overlaps with 1 and 2. Many training programmes will include, or have included at different times, pre-course tasks or activities (sometimes reading, sometimes classroom observation, or both). With a supportive digital infrastructure the process of assembling an online portfolio of evidence of relevant professional activity can begin as early as possible, and over time the habit can become ingrained and normalised. In continuous career development too, a detailed and illustrative portfolio is an important tool for showcasing capability and aptitudes.

The portfolio of evidence as a means to show professional learning and development is built-in to the process of becoming a teacher, so much so that in relation to the problem of matching evidence to the 'Teaching Standards' there have been a number of localised, bespoke digital initiatives developed over many years by individual departments of education. This background indicates the value that such tools can add to the recruitment and training process and provides a body of experience to draw from in building approaches with wider reach. For example, [Mahara](#) is an open-source portfolio system that is quite well used in Higher Education to support students building their learning portfolio ([see here for examples](#)).

### 4. CPD focus (1): Online certification/qualifications in TPCK.

The range of necessary experience, knowledge and practice that teachers of today and tomorrow require can, in principle, be accredited via online means (i.e. MOOC or similar). A related initiative is [under development in Wales](#)). A Technological, Pedagogical, and Content Knowledge ([TPCK](#)) framework is assumed because, of course, computing in one form or another, now forms a central, supporting component of effective teaching and therefore technological knowledge is an essential component of a teacher's professional knowledge.

Over the past decade or more our members have undertaken or are currently using a range of tools and techniques in online learning. This provides a sound starting point for initial developments which could be achieved fairly quickly. FutureLearn is universally available, provides a robust infrastructure with clear pedagogical design and would be a relatively low-cost solution.. [FutureLearn Partner](#) status could be acquired by an appropriate body such as the TPEA with the aim to provide an easily accessible, well-supported platform geared towards adult educational ends (certified/non-certified, accredited/non-accredited etc.).

## 5. CPD focus (2): In collaboration with subject associations develop online professional networks.

There is considerable value to be gained from more established forms of online discourse, principally social media (e.g. [Twitter](#)) and communities of practice (e.g. [Computing at School](#)). See below for further comments about the use of social media. A recommendation is that the use of [Knowledge Hub](#) (KHub) is explored as a supported, accessible tool for enabling online discourse among new recruits and possibly as an ongoing environment for serving teachers. KHub presents a fully supported infrastructure and presents a trustworthy public service oriented outlook with appropriate safeguards.

## 6: CPD focus (3): Embedding research into practice

A key theme in the rhetoric surrounding teacher development and the improvement of pedagogy is the importance of teachers, as a community and individually, taking more account of research evidence about teaching and learning and applying it in the classroom. One good example of this movement is the popularity of the [ResearchED](#) conferences; another is the recommendations of the DfE Report: "[Evidence-informed teaching: an evaluation of progress in England](#)" (July 2017)

A hugely facilitating contribution to this important trend is to ensure that teachers have routine and effective access to research reports, research data and archives. Currently working teachers do not have routine access to journal databases in the same way that further and higher education lecturers do. This should be provided as a standard component of QTS. Ironically, those new recruits who join university-based courses do have access but only as long they remain enrolled students. (See also Table 2, note 6)

## Discussion

Good teaching is something everyone likes to hear about but too few seem inspired to join in! Digital 'solutions' that aim to improve recruitment and retention must therefore directly address a range of factors (and probably several at once). These factors have broad consensus in our community and they are seen to negatively affect the attractiveness or teaching or the career prospects of those already in-service. Solutions will require the active participation and involvement of teacher training staff and recruits.

Note that there are no quick fixes. A managed approach stretching over a minimum period (one, two or three years?) may be required in order to evaluate effectiveness. A key driver may be to deploy an agile approach to educational evaluation that is dynamic, interactive and responsive to the alignment between solution and problem. The [MirandaNet iCatalyst model](#) of evaluation and action research is one example and video supported reflection CPD such as that provided through the [Iris Connect](#) platform is another.

There is no lack of tools or resources. For practitioners (either new or in-service) such resources require time to engage with, a structured or policy driven approach to their usage, protected occupational time and recognition and for participation. There is poor alignment between the intrinsic effort and motivation on the part of the individual practitioner and the extrinsic payback, i.e. professional, recognition and incentives. Without the latter, the benefits of intrinsic effort are marginal at best.

For those practitioners (teachers, lecturers, academics) who are managing the tools working digital solutions may themselves negatively impact the patterns and pressures of workload! Proper estimates of the impact of any edtech solutions on workload must therefore be examined and funded appropriately. There is the further risk too that edtech, inappropriately applied, could *exacerbate* the causes of the low esteem in which the teaching profession seems to be held, or add to the worsening rate of retention.

One key advantage of an open-source systems like Mahara or public-service provision like Knowledge Hub is that they can avoid the distractions and pitfalls of tools such as [LinkedIn](#) which, while offering some similar facilities is nevertheless a social network with somewhat different aims, or [Twitter](#) which is of course famous for its more turbulent and frequently fractious style of discourse. For the purpose of opening up career opportunities LinkedIn promotes an open-ended approach to building a contacts book for future development. By contrast, new starters, in our case new recruits to teaching, may need a more focussed approach, more closely aligned with a defined community of practice where evidence of 'strengths for teaching' can begin to be created even before the training programme has begun

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## Tables

Table 1: Summary of contributions

Allison	Allen	<ul style="list-style-type: none"> <li>Supports learning space design and configuration using biometric and physical data feedback</li> </ul>
Roger	Broadie	<ul style="list-style-type: none"> <li>Issues of R&amp;R long known about but little action taken to date.</li> </ul>
Helen	Caldwell	<ul style="list-style-type: none"> <li>Online social learning via social media is valuable. Should be organised/designed to fit with occupational structure and purpose.</li> </ul>
Charlotte	Davies	<ul style="list-style-type: none"> <li>Physiological issues in learning spaces and the use of biometric data to optimise physical conditions of learning spaces for all learners..</li> </ul>
Eric	Demoncheaux	<ul style="list-style-type: none"> <li>Need for commercial engagement.</li> </ul>
Katie	Eldridge	<ul style="list-style-type: none"> <li>On behalf of <a href="#">Iris Connect</a></li> <li>Video supported professional development</li> </ul>
David	Fuller	<ul style="list-style-type: none"> <li>Online mentoring</li> <li>International links</li> </ul>
Bob	Harrison	<ul style="list-style-type: none"> <li>DfE needs to create stability</li> </ul>
Stephen	Heppell	<ul style="list-style-type: none"> <li>Participative learning space design.</li> <li><a href="#">Learnometer</a></li> </ul>
David	Longman	<ul style="list-style-type: none"> <li>KHub. OpenLearn. <a href="#">Open Classrooms initiative</a>.</li> <li>Video Supported Reflective Practice</li> <li>Automation of tasks - e.g. attendance; parts of assessment.</li> <li>Access to research journals for QTS similar to HE</li> </ul>

		<ul style="list-style-type: none"> <li>• Need for professional recognition and reward of participation in digital activities</li> <li>• Online CPD portfolio (e.g. Mahara)</li> <li>• Use social media/networks already in place - e.g KHub</li> </ul>
Daniel	Needlestone	<ul style="list-style-type: none"> <li>• Workload issues (both teaching and admin). Ue of technology manage workload.</li> <li>• Need for protected CPD time (use at discretion of teacher).</li> <li>• Pay and conditions.</li> <li>• Use of online CV tools for recruitment and development such as <a href="#">Successfactors/SAP</a>, <a href="#">Cornerstone</a>, <a href="#">Workday</a> . <a href="#">AI to help recruitment</a>, or <a href="#">career development</a></li> </ul>
Jocelyn	Wishart	<ul style="list-style-type: none"> <li>• Workload pressure</li> <li>• Online tools can make matters worse if workload not adjusted</li> <li>• Too little supported CPD</li> <li>• Video is a good medium for professional learning.</li> </ul>
Chris	Yapp	<ul style="list-style-type: none"> <li>• Open University/OpenLearn</li> <li>• Automation of tasks - e.g. attendance; parts of assessment; homework management.</li> </ul>

Table 2: Summary of Recruitment and Retention Challenges

Numbers after each bullet point refer to the source at end of table.

Bullet points highlighted in **red** are **challenges** we suggest could be met with digital solutions.

<p><b>Recruitment oriented factors:</b></p> <p><i>Trend: education funding cuts and consequences for staffing. 2</i>  <i>Trend: decline in recruitment to ITT</i>  <i>Trend: rising pupil numbers stimulates increased demand for new teachers. 1,2, 4</i>  <i>Only history and PE have met recruitment demand targets - all other subjects in varying deficit with missed targets. 1, 2, 4 (Note: see tables in source 4)</i></p> <ul style="list-style-type: none"> <li>○ <i>Notwithstanding that entry requirements have been lowered! 5 (See <a href="#">TES also</a>)</i></li> </ul> <p><i>Accountability culture can be a deterrent to some potential recruits. 3</i>  <i>Complexity of routes into teaching. 2, 5</i>  <i>Complexity of provision. 2, 5</i>  <i>Pay and allowances are crucial to both R&amp;R. 1, 4, 5</i>  <i>There are more appealing graduate alternatives offering better salary potentials compared with teaching. 2, 4</i></p>
<p><b>Retention oriented factors:</b></p> <ul style="list-style-type: none"> <li>• <i>Workload and work life balance the most cited reasons for leaving teaching. 1, 2, 4</i></li> <li>• <i>Workload manageability is more important than time spent. 3</i></li> <li>• <i>Education funding cuts and consequences for staffing. 2</i></li> <li>• <i>School budgets: Increased spend on job advertising. 1</i></li> <li>• <i>'EBacc effect' - focus on core curriculum increases demand for core teachers (but a continued shortfall on targets); demand for marginalised subjects decreases (but there is oversupply) 4</i></li> <li>• <i>Lot of teaching done by teachers with little or no subject knowledge. 1</i></li> </ul>

- *Increased rate of temporary/short term appointments. 1*
- *Subject specific CPD can improve retention 3*
- *Restrictive visa conditions limit access to potential recruits. 2*
- *Poor career prospects. 3*
- *Instability/changeability of policy and personnel at the DfE. 5*

Sources:

1. NEU - NUT Section (nd). [Teacher Recruitment and Retention](#) [Accessed 18-Jun-2018]
2. Huffpost: 26-Feb-2017. [Five Reasons For the UK's Worst-Ever Teacher Shortage](#) (Referring to a [NAO Report](#))
3. Guardian: 16-Nov-2017. [Cutting workload isn't enough to stop teachers leaving schools](#)
4. National Education Union (nd). [How bad does a teacher recruitment crisis have to be before the DfE calls it a crisis?](#) [Accessed 18-Jun-2018]  
Pay gap between teaching and other professions harming education (11-Sep-2018)  
<https://www.naswt.org.uk/article-listing/pay-gap-with-other-professions-harming-education.html>
5. SchoolsWeek, 18-June-2018. [5 ways the DfE has damaged teacher recruitment](#)
6. A cost-effective initiative for access to published research:  
<https://sciencebusiness.net/news/eu-and-national-funders-launch-plan-free-and-immediate-open-access-journals>