

Published version - Allen, M., Briten, E., Maude, K., Sossick, M., Valentine, M.J. (2017)
'Catching them early: identifying potential early-career leavers', *TEAN Journal*, 9(2), pp.
110-123 – available at <http://194.81.189.19/ojs/index.php/TEAN/issue/view/65>

Catching them early: Identifying potential early-career leavers

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Note: The total word count for the document is currently reading 6140.
However, the word count for the text alone (minus abstract, references,
figures, key words and title page) is 4992.

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Abstract

This article describes a small-scale quantitative study that explored levels of satisfaction within a sample of student teachers at two points in time. A first questionnaire was completed during students' final year at an English university and comprised of questions relating to their satisfaction with school experience. A second was conducted mid-way through their subsequent Newly Qualified Teacher (NQT) year, asking similar questions to the first, but applicable to their NQT school. Data indicated that a notable proportion of NQTs had considered leaving the teaching profession since they had qualified. Significantly, it was possible to identify these individuals from the rest of the student cohort by examining their responses from the first questionnaire. This indicates that teachers in danger of leaving the teaching profession at an early stage in their post-qualification career could potentially be recognized during their university training. Finally, issues surrounding the overt labelling of students as being a 'leaving risk' are discussed.

Key words: Primary teacher education, teacher supply and retention, resilience, Newly Qualified Teacher, quantitative method.

Background and literature review

It is well recognised that a link exists between effective teaching and pupil progress (Allen *et al.*, 2012; Sutton Trust, 2011). All children need access to skilled professionals who can inspire their learning and prepare them for the challenges of the 21st Century. It is alarming then to note that 50% of English schools had unfilled teaching positions at the start of 2015-16, being forced to turn to unqualified staff, temporary supply teachers and non-specialists in order to plug the gaps (Powell, 2015). According to the recent *State of Education* report that focused on current issues in England, 35% of primary heads and 49% of secondary heads reported teacher shortages in 2015-2016 (Cooke, 2016). The same report found that 60% of primary heads and 76% of secondary heads were finding recruitment challenging. Such is the concern over the issue of teacher supply that the United Kingdom National Audit Office, the Public Accounts Committee and the Education Select Committee have spent considerable time in 2016 cross-examining ministers and members of the National College of Teaching and Leadership (NCTL) about their concerns.

The statistics suggest that the current high attrition rate of primary teachers is a significant factor in the lack of qualified teachers in the classroom. According to a recent UK government paper 49,100 qualified teachers left the state-funded sector during 2013-2014 (Foster, 2015). This represented a wastage rate of 10.4% with the number of teachers leaving the profession being higher than the number entering, for the first time since 2011 (*ibid.*). Foster also states that 19% of newly qualified entrants to the sector in 2012 were not recorded as working in the state sector two years later. Concerns were further raised by a YouGov survey conducted for the National Union of Teachers in 2015 which suggested that 53% of teachers in England were considering leaving the profession within the next two years (NUT, 2015).

The consequent lack of personnel in the classroom is being partially shored up by supply teachers, with inevitable financial implications for schools. According to Powell (2015) the average spend on supply teachers by English academies and free schools has risen by 42% in one year with the overall spend by schools standing at £1.3 billion. These figures show that precious finances intended to enrich pupils' educational experiences and enhance achievement are being put to the more fundamental use of ensuring teachers are in the classroom.

Various reasons for the teacher shortage have been proposed; to understand the issue may help supply the remedy. Sir Michael Wilshaw, chief of the Office for Standards in Education (Ofsted – the UK government's education inspectorate), has stated that teacher shortages are most problematic in isolated, coastal and disadvantaged areas (cited in Zeffman & Helm, 2016). This is supported by Allen *et al.* (2012) who identified a raw association between the level of school disadvantage and the turnover rate of its teachers. A UK National Audit Office report in February 2016 concluded that 'retention may be becoming an increasing problem' (NAO, 2016: 14). A YouGov survey conducted in 2015 highlighted two key reasons for teachers leaving the profession, 'volume of workload' (61%) and 'seeking better work/life balance' (57%) (NUT, 2015, no page). The *State of the Nation* report on retention found that 44% of heads surveyed claimed that teachers were leaving their schools as they were unable to cope with the workload (Cooke, 2016). This is not surprising since schools increasingly have multiple responsibilities. They are not only accountable for the education and welfare of children but also train unqualified teachers and supply professional development to linked schools. Looking into the future it is difficult to anticipate an improvement in teacher numbers in England since the national teacher shortage is further compounded by the low recruitment of trainee primary teachers onto Initial Teacher Training (ITT) courses in Higher Education Institutions (HEI's). For a third successive year the government's teacher recruitment targets were not met (Richardson, 2015) with consequent loss of supply to the school market. Despite this, the NCTL had capped ITT student allocations over this period, not permitting HEIs to recruit to the extent that they were able to. A projected rise in future pupil numbers is set to exacerbate the situation further (Foster, 2015).

It is clear there is an impending crisis and urgent action is needed. Teacher shortages will have inevitable impact on the quality of children's education and potential future success. While moves are being made by the UK government to improve teacher recruitment, it is imperative that the high attrition rate is investigated by parties such as HEIs in order to understand the problem and identify appropriate solutions. This article sets out to explore potential reasons for the high attrition rate amongst teachers new to the profession and considers possible underlying causative factors.

Methodology

Rationale

In order to help address the issue of future teacher retention, a research question was formulated: *Is it possible to identify university ITT students who will subsequently have thoughts about leaving the profession during their NQT year?* If potential early career leavers can be identified during the ITT period then appropriate

interventions could be applied before they qualify in order to promote future retention. Such interventions could conceivably carry over into the NQT period (though the pros and cons of overtly labelling new teachers as 'at risk' are discussed in the final section of the article). The research question was operationalised by asking individuals to complete two questionnaires.

The first questionnaire (*ITT questionnaire*) had been completed in 2015, prior to the genesis of the current study, when students were in their final year of university training. This questionnaire was part of a completely different study that focused on the quality of partnership schools. The dataset from this ITT Questionnaire acted as a trigger for the current study since it revealed common areas of dissatisfaction with the school experience during training, some relating to feelings of being undervalued by school staff or university tutors, others to excessive workload. We wanted to know whether these feelings continued into the NQT year, and whether they were related to thoughts of leaving the profession. In order to do this, the individuals who had completed the ITT questionnaire were invited to complete a different, second instrument (*NQT questionnaire*) more than a year later while they were mid-way through their NQT period.

Primarily, with the NQT questionnaire we wanted to identify teachers who may be considering leaving their school, or more importantly, quitting the profession. Once these individuals were identified we looked back at their responses from the previous ITT questionnaire that they had completed more than a year before, to see if there were any clues that could have identified them as potential early career leavers whilst they were still at university. Of course, it was too late for the university to implement any interventions for these teachers now they are employed as NQTs. However, looking ahead at future cohorts, once we knew what clues to look for in students still at university that may indicate future dissatisfaction during the NQT period, then this presents the possibility of introducing timely interventions at university that might promote later retention.

Sample

The initial sample that completed the ITT questionnaire consisted of 176 university students who were enrolled on either a Bachelor of Arts (BA) Primary Education or Primary Postgraduate Certificate of Education (PGCE) course, and had recently completed school experience. All of these students attended the same university located in the south east of England. The age range was 20-44 years (mean age 25 years 6 months), and there was a mixture of ethnic groups, with the largest being white British (84% of the sample). The same 176 students were then invited to complete the NQT questionnaire over a year later, mid-way through their NQT period.

Method

This was a longitudinal study carried out over an 18 month period that employed two different questionnaires in order to generate two distinct datasets. The first dataset was derived from an online instrument, the ITT questionnaire, completed in January 2015 that focused on aspects of students' school experience. There were 48 items in total, organised into five different sections: how the university had prepared them to reach the Teachers' Standards; their experiences of being inducted during their first

week at the school; how the school and university had supported their development as a teacher during the school experience; quality and effectiveness of feedback given by school and university staff; and overall feelings of the school experience. Items were presented as Likert scales, although the final item from each section was an opportunity for respondents to provide open-ended responses. In addition to these sections, at the end of the questionnaire a number of other items asked for demographic details such as age, gender, and ethnic group, as well as the type of school, age of the children, etc. So that the two different datasets could be compared respondents were asked to include their names; as such, data were not anonymised.

The second dataset utilised responses from the online NQT questionnaire which was sent out to the same individuals in April 2016. For all practical purposes, all of the 42 items in this questionnaire asked about same aspects of school experience as the previous ITT questionnaire. Due to irrelevance, some of the wording was changed; for instance, from 'school-based mentor' to 'NQT mentor', and all references to the university link tutor were deleted (which is why there were fewer items in the NQT questionnaire). The items were arranged into the same sections as the ITT questionnaire, as detailed in the previous paragraph. However, an additional section was included that asked about feelings of leaving the job or the profession – the potential early career leaver section. Figures 2-11 summarise individual items from the questionnaires.

Analysis

The primary aim of analysis was to undertake statistical comparisons between items in the potential early career leaver section of the NQT questionnaire, and items from the previous ITT questionnaire. This was done to try to look for clues from feelings expressed during university training that may indicate a teacher who later had thoughts about leaving the school or profession during the NQT period. First, counts were completed for each questionnaire section so that visual comparisons could be made between the responses given in the two questionnaires (figures 2-7). These representations were created to offer the reader a feeling for the overall choices made by individuals at the two points of data collection and bear little direct relation to the research question. They are included for completeness' sake. It is however, important to note that from the 176 students from the previous ITT study, 14 took part in the NQT part of the research, and the figures represent data from this smaller sample.

The Likert responses from the questionnaires were converted to quantitative data by scoring thusly: Agree = 1; Slightly Agree = 2; Slightly Disagree = 3; Disagree = 4. Therefore, each individual's responses could be totalled to give an overall score that indicated how satisfied they had been with school experience, and with the NQT period at a mid-way point. Note that because of this scoring rubric the more satisfied people generated lower scores, and *vice versa*.

From these data, two scales were then formulated based on the ordinal responses to items from each questionnaire. The two scales are not directly comparable with each other because there were fewer questions in the NQT questionnaire. They do, however, allow the allocation of two 'satisfaction scores', one from each questionnaire, to each respondent that was used during later analysis. Internal consistency of the two scales was very good, as demonstrated by the high

Cronbach's alpha values, which suggests that that the items were not answered by respondents in a random way. Inferential statistical operations that were applied were Pearson's correlation r and Student's t test. Figure 1 summarises descriptive statistics for the two scales.

	ITT scale	NQT scale
No. of items	48	42
Mean score	77.5	67.7
Maximum score	110	120
Minimum score	49	48
Standard deviation	16.5	21.2
No. of respondents analysed	14	14
Cronbach's alpha	0.89	0.95

Figure 1 Descriptive statistics for the ITT and NQT scales

Results and discussion

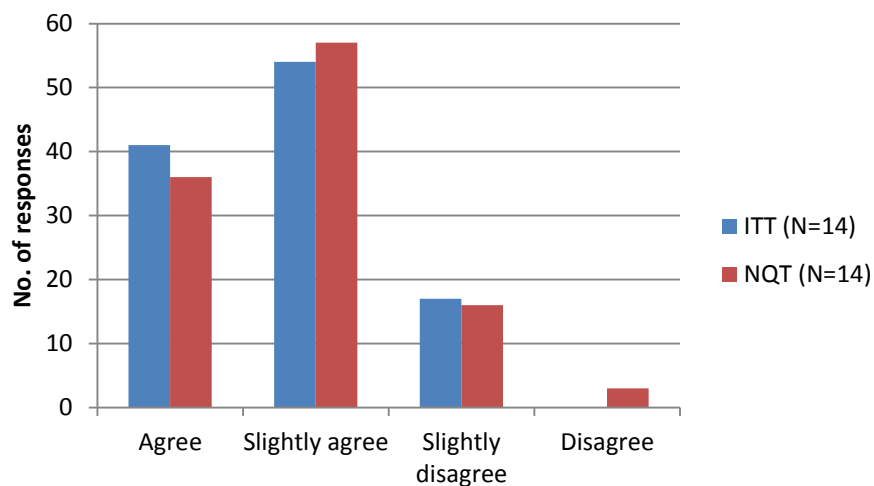


Figure 2 Influence of university training (questionnaire sections i/1)

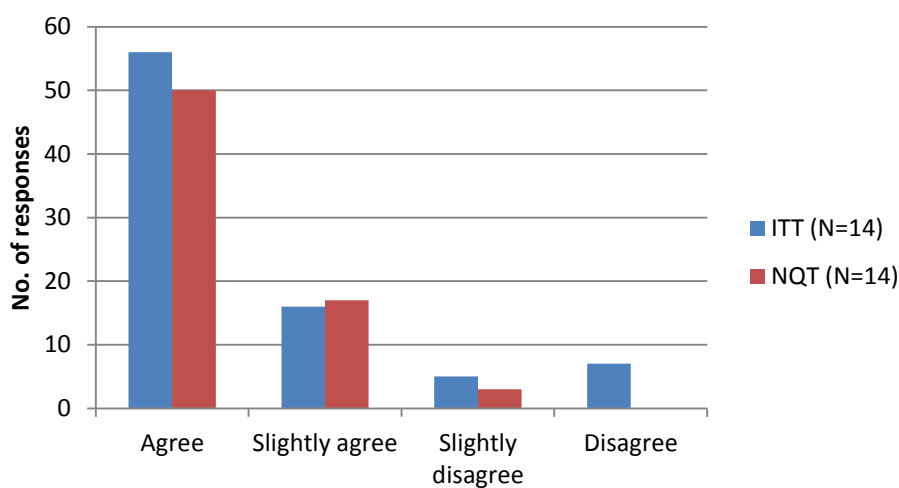


Figure 3 NQT induction (questionnaire sections iii/2)

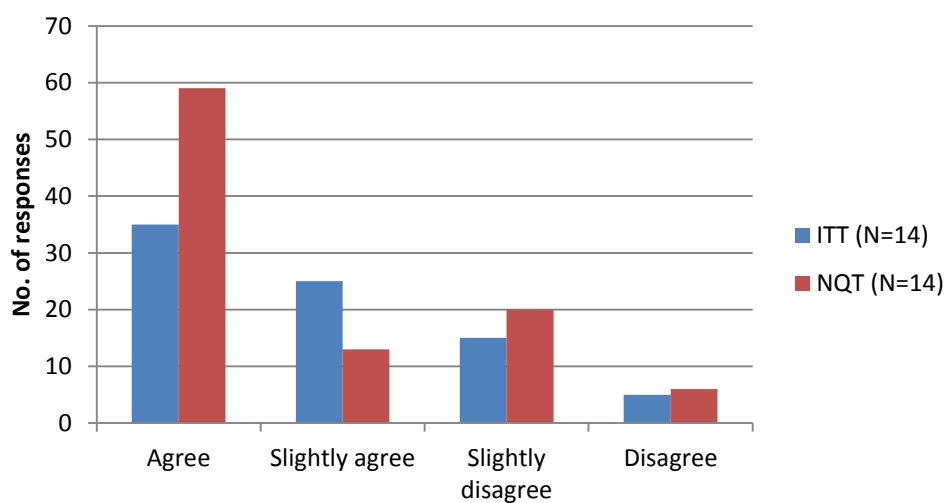


Figure 4 Reflections of own teaching performance (questionnaire sections iv/3)

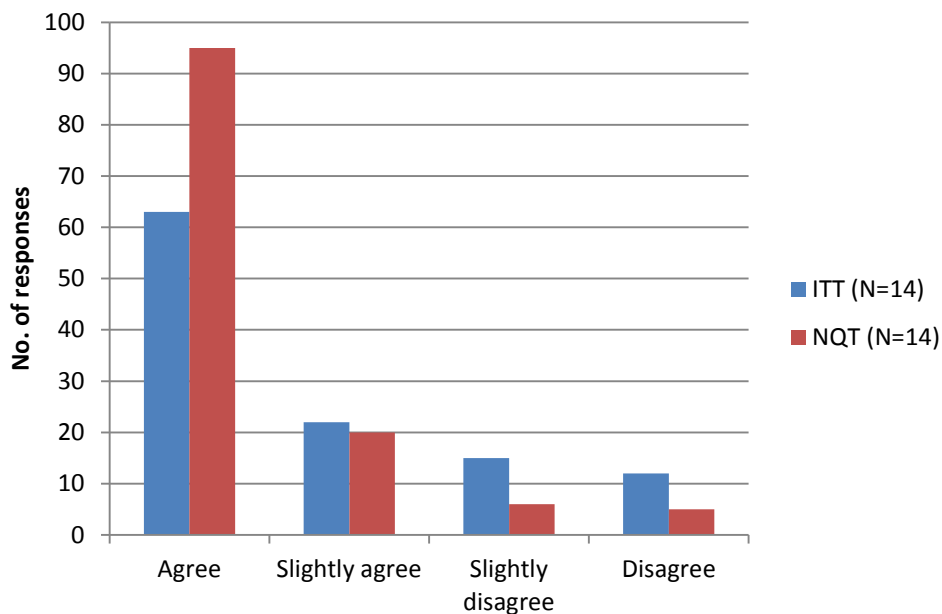


Figure 5 Quality of feedback and assessment (questionnaire sections v/4)

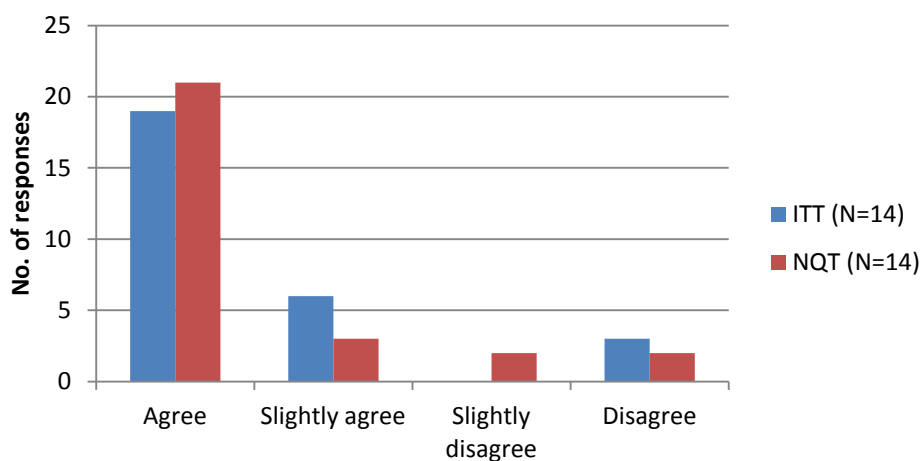


Figure 6 Overall impressions of ITT/NQT year (questionnaire sections vii/5)

Comparisons of ITT and NQT overall satisfaction

Figures 2-6 show how different sections of the two scales compare with each other, i.e. how satisfied individuals were at the ITT and NQT stages. Although these graphs denote numerical differences, when the different sections of the two scales were compared there were no statistically significant differences, with a single exception: section iii/2 (induction into school), suggested that individuals were happier with the induction procedures at their NQT school compared with their ITT placement school ($t= 2.17$; $p= 0.049$). Students' comments at both the ITT and NQT stages indicated specific procedures and documentation that they thought could have made for a better induction period:

Roxanne (ITT): 'Be given tasks during the first week that involves getting involved with children rather than just making notes.'

Sue (NQT): 'Information about expectations and evidence documentation needed for completion of the NQT year. A

structured timetable for observations of other teachers for development of classroom skills.'

When all the data were combined to give overall satisfaction scores, the two scales were statistically equivalent, i.e. neither the ITT nor the NQT group was more satisfied than the other ($t= 1.36, p> 0.1$). However, further analysis did reveal a notable, significant association between the two scales. This is discussed later in some detail as it impacts substantially upon implications for future directions.

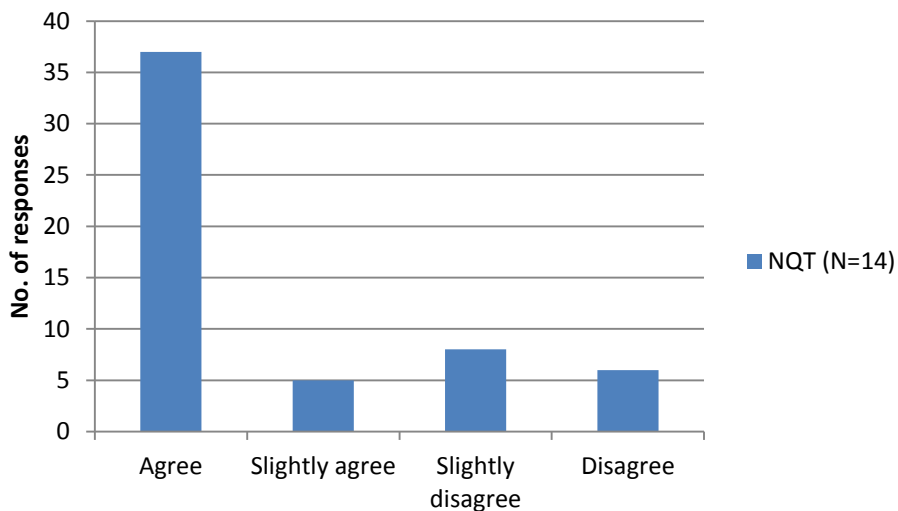


Figure 7 Section 6 counts (NQT only): Potential early leaver section

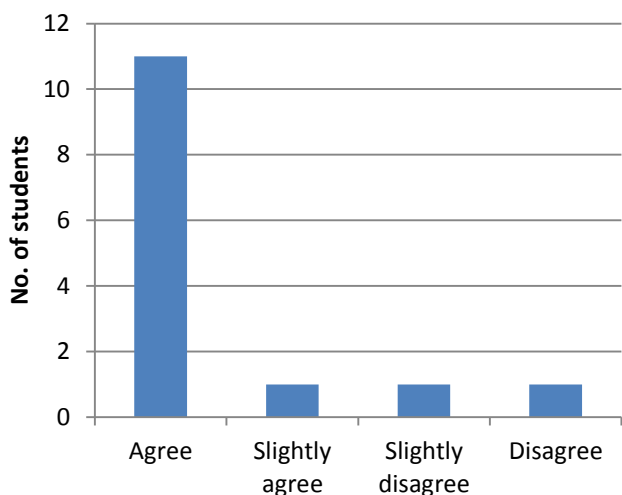


Figure 8 Section 6, Q11a counts (N=14): *I plan to continue as a teacher at this school after completion of my NQT period*

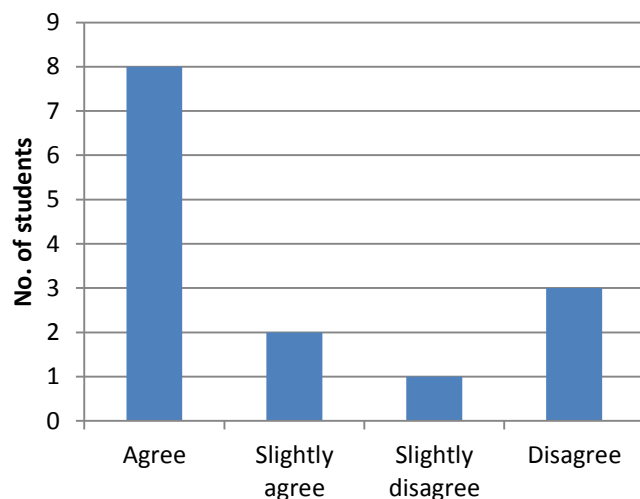


Figure 9 Section 6, Q11b counts (N=14) *(I have never considered leaving this school before completion of my NQT period)*

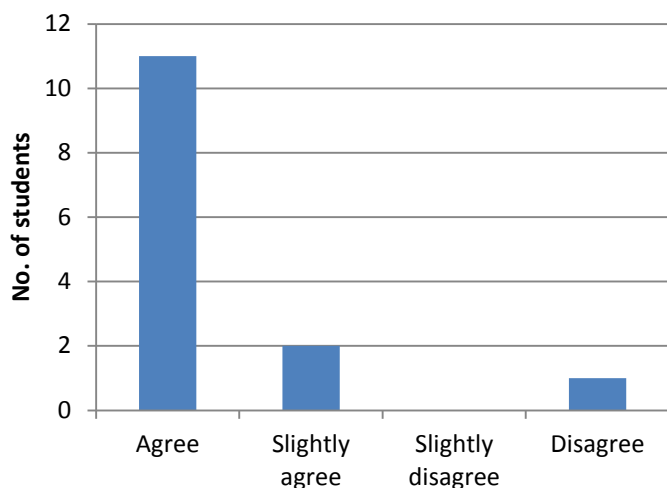


Figure 10 Section 6, Q11c counts (N=14): *I plan to continue in the teaching profession after completion of my NQT period*

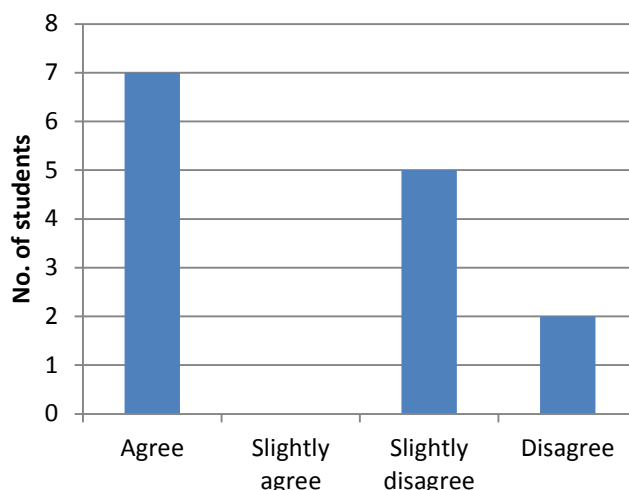


Figure 11 Section 6, Q11d counts (N=14) *I have never considered leaving the teaching profession since I became an NQT*

Potential early career leaver section

Section 6 of the NQT questionnaire provided items that questioned respondents' views about whether they had considered leaving their school after completion of the NQT period, and importantly, if they had thought about quitting the profession (figure 7). Figures 8-11 give individual counts for the four items. Two items (figures 8 and 9) were focused on their feelings about remaining at their current school and showed that 12/14 individuals at this point in time did plan to stay on for a second year, although 7/14 had at some point had considered leaving. The 3/14 NQTs who chose 'Disagree' in figure 9 had thought seriously about leaving the school, and although a desire to move on can be driven by positive motivations such as seeking promotion, the open-ended comments provided by the three were entirely negative. They cited, for instance, problems with children's behaviour, rude parents, pressure from senior leadership over learning outcomes and assessment, or a general lack of support from the school. One of the NQTs had already left his school by this mid-term stage, and his comments were telling:

Samuel (NQT): 'I have left my original NQT school due to workload and anxiety [as well as] not being able to balance work and life properly. I have enjoyed working with the children and other members of staff. I have felt very supported but I felt the school's approach to marking, planning and assessment was creating too much workload. However, I have already secured a new position to continue my NQT year from September and I have successfully completed the 1st term.'

Figures 10 and 11 show two items that enquired about whether the NQTs had considered leaving the profession, and were the most relevant to the research question that directed the current study. Although 13/14 planned to continue in the profession at this stage of the NQT period, 7/14 had experienced thoughts about leaving, two of them presumably at a serious level (since they chose 'Disagree'). We believe that the fact that 50% of this small sample had already considered leaving

teaching is notable, and we called these potential early career leavers, the ‘waverers’.

Looking at the waverers’ responses in other areas of the NQT questionnaire, it was found that there were specific areas of dissatisfaction at their present school; figure 12 summarises these. They represent ways in which waverers’ responses were statistically different to the other NQTs in the sample, and could potentially be used by NQT mentors as signs of a deeper dissatisfaction with the job in general.

Once the waverers had been identified we wanted to know whether there had been signals of dissatisfaction earlier on whilst they were still at university; consequently their responses in the ITT questionnaire were closely scrutinised. We compared their ITT responses with those of non-waverers in the sample, and although there were some large numerical differences, none were significant statistically. Therefore, no individual ITT questionnaire items were associated with future waverers, suggesting it might be impossible to detect them during their time at university from responses given in the ITT questionnaire. However, the final step of analysis, discussed next, showed that this was not the case.

	t value	P value
Current workload is unsustainable (section 5, item h)	4.33	< 0.001
Felt the university had not prepared them adequately to assess (section 1, item e)	3.36	< 0.01
Had higher NQT scale overall satisfaction scores (i.e. were <i>less</i> satisfied than non-waverers with their NQT experience)	2.65	< 0.05
Not been able to implement the theory, skills and professional values gained in the university (section 3, item c)	2.52	< 0.05
Application of differentiation has not been supported (section 3, item e)	2.45	< 0.05
Subject-specific pedagogy had not been supported (section 3, item f)	2.22	< 0.05

Figure 12 Items from the NQT scale that indicated waverers

Further comparisons of ITT and NQT overall satisfaction scores

When Pearson’s correlation test was applied to the ITT and NQT scores, a significant negative association was found ($r = -0.57$, $p < 0.05$). This shows, counterintuitively, that the most satisfied ITT students went on to become the most dissatisfied NQTs, and *vice versa*. When these data are taken at face value it appears that the students least in danger of dropping out of university were destined to become most at risk once they qualify. There were no discernible patterns that would help explain this association when we took into account gender, type of NQT school, age of children, age of respondent, route (BA, PGCE, School Direct), and final school experience grade. Therefore, in the absence of further personal data about the respondents the most likely association with NQT dissatisfaction is a previously satisfied university student. In order to exemplify this pattern, figure 13 gives the comments of individuals at the ITT and NQT stages which shows people’s changing views between the two time periods (note that a high score indicates low

satisfaction). One striking exemplar of this pattern is Samuel, who is not included in figure 13 but whose comments are given above, who left his NQT school after the first term despite being awarded the prize for best performing student of his year group at the conclusion of his university course.

When this negative correlation was explored in more detail there was only one association between the individual sections on the ITT scale and the NQT overall satisfaction score – section iv (figure 4). This section focused on how well the school experience had supported different aspects of their development as a teacher and touched on student's self-confidence in their lesson planning, subject knowledge and pedagogy. Ostensibly, it reflected how effectively a student felt they themselves had performed within the context of the placement school. Once again, counterintuitively, there was a negative correlation between ITT section iv scores and NQT dissatisfaction ($r = -0.60$, $p < 0.05$) suggesting that those who are the most confident about their performance in the ITT placement school became the most dissatisfied NQTs, and *vice versa*. The areas of their ITT practice where students felt the most confident were their own subject knowledge (item e) and their pedagogy (item f), although this difference was numerical and not statistical. As with the overall negative correlation discussed in the previous paragraph, if university students appear confident with these aspects of their own performance in their placement schools then this may be a marker for future dissatisfaction.

Interpreting the data

a) Resilience

The literature reveals possible reasons for the negative associations that exist in the data. At the most superficial level, a student with higher expectations about their NQT year may be more likely to experience later disappointment should the job not fully live up to expectations (and *vice versa*). In other words, students who are more reflective and realistic about their abilities, grade themselves worse than their peers when asked about their performance in their training year. This leads to lower expectations about how they will perform during the NQT year, and so are consequently more mentally prepared for the realities of the job. The concept of resilience has recently been brought to the forefront in education in England and Wales (Paterson *et al.*, 2014), in part as a way of accounting for the haemorrhaging of teachers from the profession. Ideally, strategies that build teacher resilience would be implemented during the ITT year, in combination with recruitment policies that would select only candidates who are thought could deal adequately with the pressures and demands of the NQT year. However, in recent years teacher recruitment itself has been in crisis so applying very rigorous selection criteria may not be an option, especially for HEIs.

b) Transition shock

It has been known for some time that the transition that teachers undergo when switching from higher education to their professional lives is sometimes not a smooth one (Jesus & Paixao, 1996). Extra demands that were absent from the ITT period include teaching a full timetable, report writing, pupil progress meetings, extra-curricular commitments, responsibility for an area of the curriculum, and accountability for pupil advancement that is increasingly linked to performance management and career progression. It may have been the case that some of the waverers from the current study were in the midst of transition shock when they

completed the NQT questionnaire. On an optimistic note, transition shock is in most cases transient and the waverers may have well later in the NQT period been able to better cope with the issues that they felt they were struggling with at the mid-point.

	ITT score	NQT score	ITT comments	NQT comments
Sally	110	48	<p><i>We were not supported and only received negative comments about our teaching (being told in the first week that we would not get Outstanding in our practise). We were used as cover repeatedly, to the extent that I was always in the classroom on my own in the mornings and with a TA in the afternoon...I feel that the University could have stepped in more to help us with the issues. The school seemed unaware that we were not to be used for cover or that we required extra PPA.</i></p> <p>(Federated primary school; Sally was awarded grade 1).</p>	<p><i>The school is very supportive and accepting. The children are lovely and I really enjoy my job.</i></p> <p>(Free school).</p>
Rayette	49	120	<p><i>[This] school was the perfect place to start my teaching practice. The staff were all warm and welcoming and highly approachable. I look forward to carrying out my NQT year there in September! A massive thank you to my class teacher and SBM...who made sure that I received the necessary support and provided me with the opportunity to challenge myself and teach [whole] days/weeks at [this school]!</i></p> <p>(Free school; Rayette was awarded grade 1).</p>	<p><i>Pressure from SMT on pupil progress despite having the lowest class in my year group. Assessment demands from SMT although they themselves have no idea.</i></p> <p>(Free school – the same as her ITT school).</p>
Lucy	104	48	<p><i>My teacher was a lovely person with great experience but had to help out in other areas of the school so I was left to cover for her. This was not her fault and if this hadn't been the case I believe she would have been far more hands on with my training. For this reason I would like to ask that this feedback is not shared with her as my child will be attending this school and I don't want there to be any future issue.</i></p> <p>(LEA primary school; Lucy was awarded grade 1).</p>	<p><i>Ethos matches with mine and I have a genuine care for all of the children and their families in the school</i></p> <p>(LEA primary school).</p>
Julie	71	91	<p>No comment.</p> <p>(Independent school; Julie was awarded grade 2).</p>	<p><i>A horrible, controlling Early Years Coordinator and no support from head or mentor to change things in the team...I am not staying in the school</i></p> <p>(Independent school).</p>

Figure 13 Comparisons of comments from the same individuals on the ITT and NQT questionnaires

c) Burnout in teachers

Friedman (2000) describes the symptoms of teacher burnout that lead to thoughts of leaving the profession. These include feeling physically, emotionally and mentally 'washed out', illness (including depression) that leads to absence from school, feelings of dissatisfaction and frustration, and a loss of compassion towards the children they teach. Some of the waverers' comments in the current study may be indications of early burnout; in fact, Jesus and Paixao (1996) argue that in many cases burnout is more common near the start of a teacher's career. ITT programmes have been criticised for providing idealised and unrealistic images of what an effective teacher should be, and disregard the substantial obstacles that will be encountered during their early professional lives (ibid.). It may be the case that those teachers who possess high levels of idealism and commitment are more prone to burnout, a view that concurs with the negative associations determined in the current study.

d) Overconfidence bias

Generally, people are not very successful in accurately estimating their own ability level, instead either over or underestimating their real-world performance (Fruend & Kasten, 2011). For instance, Morris (2001) describes a study where ITT students had predicted their ability in maths prior to completing a maths audit test. Many of the sample who were initially confident in their mathematical ability consequently scored low in the audit, and found it difficult to accept they had answered incorrectly when they were given back their marked scripts; this is an example of overconfidence bias. Those people who have a tendency to overestimate their ability often do so to maintain their self-image - it helps self-esteem to think one is better than average (Fruend & Kasten, 2011). In fact, recruitment consultants have used estimates of achievement in tests to assess aspects of candidates' personalities.

In the current study, students who provided higher estimations of their own performance at their training school in section iv of the questionnaire went on to become the more dissatisfied during the NQT period. Overconfidence bias may have been a factor here. It may be the case that these students felt they were coping well in the more forgiving environment of their training school and graded themselves as good or excellent performers. However, once they underwent a more demanding test as NQTs, they discovered their abilities were not as high as they had previously thought, with self-image suffering as a consequence.

Conclusions and Implications

The statistical associations determined in this study suggest that it may be possible to identify student teachers at university who may later have thoughts about whether or not the teaching profession is for them. These individuals could be identified through application of a similar questionnaire as used by the study, and described in detail above. However, practically adopting such an early warning system would likely be problematic. An obvious way forward would be to provide interventions for potential future waverers whilst at university – these for instance could take the form of group meetings or attending resilience enhancement sessions. One might argue that overtly labelling people who may not have high resilience to begin with might

end up with a self-fulfilling prophecy, where they question their own abilities and value, and talk themselves out of the profession. Taking this idea further, individuals' NQT schools could be informed and upon their appointment they would be labelled as 'at risk', with appropriate interventions being applied at their new school. Alternately, a less direct response could have the HEI not informing the student that they are a potential waverer but instead keeping a 'fatherly eye' on them during their time on the course. This information could be shared with NQT schools upon graduation, who would similarly adopt a light-touch approach of clandestine performance monitoring, although the legality of such a strategy is questionable.

Through this research we had the opportunity to bring under the lens our own institution's ethos of teacher training which we consider to be caring and student-centred. We have had to take a hard look at this aspect of our provision and question whether by being perhaps overly-maternalistic and spoon-feeding we may unwittingly not be sufficiently nurturing resilience in our student teachers. Another aspect to this is the variance of school experience that is outside of the university's control – students receive differing levels of support by school staff, depending on where they are placed. An important challenge for teacher educators is to attempt to find new ways of creating opportunities for learning about the realities of future professional lives which would be meaningful for student teachers (Loughran & Berry, 2005). In order to develop resilience in student teachers it may be beneficial to be explicit about exactly what one is doing and why. Hamilton's (1998) self-study methodology might help teacher educators to better understand relevant aspects of their practice (how to develop resilience) through an articulation of tensions and assertions. Being explicit about the ongoing tensions associated with balancing student teachers' perceived needs and concerns and teacher educator's beliefs about what they need to know and be able to do, might help shape views about how we can begin to inculcate resilience amongst student teachers.

Another layer could be the need to offer our students access to the pedagogical reasoning, feelings, thoughts and actions that accompany our practice across a range of teaching and learning experiences. Through such 'meta-learning' student teachers may have opportunities to learn beyond the immediate and unveil learning about learning and teaching being experienced. Loughran and Berry (2005) articulate the use of pedagogic interventions where teacher educators consciously engage with actions which are intended to 'disturb' and/or highlight particular instances in student teachers' learning so that they develop a more realistic and resilient view of their own competence in the classroom. We do this currently to some degree at our institution since these issues are embedded within the marking criteria of written assignments. Nevertheless, students often find it difficult to link the two domains of university and school in effective ways. As Korthagen *et al.* (2001) suggest, the task of the teacher educator is to help student teachers explore and refine their perceptions through the opportunity to reflect systematically on the details of their practical experiences. That said, deciding which aspects of our own practice to make explicit, how to make explicit, and when so that they might be useful and meaningful for student teachers may become an ongoing dilemma (Nicol, 1997) in attempting to move towards explicit modelling.

Further research in this area could include designing a longer-term longitudinal study that tracks a larger group of students through training and the first few years of their

professional life. Such a study would collect both quantitative and qualitative data, and investigate how people's thoughts and feelings about teaching evolve over a long period of time, helping illuminate precise sequences of events that might lead to a teacher leaving the profession at an early stage. Once these become apparent, appropriate interventions could be implemented, perhaps in the form of systematic schemes of professional counselling or mentoring for those who show signs of being at risk. As is hopefully evident from the discussion above, adopting future steps to take is not a simple task but we argue that such work as this study is crucial to better understand how we can encourage student teachers to become resilient professionals. We trust that it may serve as an impetus for others to begin to move towards an articulation of some aspects of teacher education pedagogy that focusses on creating resilience in the next generation of teachers.

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