The challenges facing Postgraduate Trainees in Initial Teacher Education coming from practical or vocational degrees

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Abstract
This study explores some of the challenges experienced by one-year Initial Teacher Training (ITT) students, on a Postgraduate Certificate of Education (PGCE) course, coming from practical or vocational undergraduate degrees and their experience of postgraduate writing at Masters Level (M-Level). The study originated from trainees' self-reported and perceived difficulties when engaging with the diffuse and cyclic nature of reflection and reflective writing, requiring beginning teachers to evaluate and reinvent themselves. The argument of this paper is that ITT trainees' prior experience of academia and professional disciplines influences their perceptions of performance in postgraduate writing. This may contribute to a perceived uneven playing field, with trainees from some disciplines beginning their PGCE with different experience of academic writing disciplines: raising practical questions about the expectations of ITT programmes and pedagogical approaches to supporting trainees from particular subject disciplines.

Key Words
Initial Teacher Education; PGCE; M-Level; academic writing; vocational; practical; academic; reflection; Design and Technology; Engineering.

Introduction and Context

The context for this study is the Postgraduate Certificate in Education (PGCE) Secondary programme at a Higher Education Institution (HEI) in the Northwest of England. Alongside the traditional secondary education (11-16) routes in National Curriculum subjects, a range of applied (14-19) Initial Teacher Training (ITT) routes were also offered, from 2008 (TDA, 2008), until their demise in 2012. The Tomlinson Report (2004) outlined a proposal to the administration at the time for a revitalisation of the 14-19 curriculum; from which developed the Applied GCSE and A Levels and the Specialist Diplomas (Pring *et al.,* 2009: 7,121; Tomlinson, 2004). Six years on under a new coalition government and a changed economic climate, Michael Gove (2010) delivered a speech to the Edge Foundation announcing a review of vocational education, reminiscent of a return to being viewed as separate and, potentially, as a 'dirty word' (Judith Judd cited in Stronach, 1989). More recent

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developments in education with the introduction of the English Baccalaureate appear to reinforce an academic-vocational divide (DFE, 2012; James, Guile and Unwin, 2011: 23; Fuller and Unwin, 2011: 196; Wolf, 2011).

This study investigates the challenges that ITE learners from vocational (Dakers, 2007; Banks, 1994: 199-208) backgrounds face when undertaking a PGCE; first posed at the Design and Technology Association's annual conference in 2010 (McLain, 2010). On examining the literature available, it became apparent that there were two streams of information that informed the debate: *first*, the literature relating to the development of the PGCE at Masters Level (M-Level); and *second*, the nature of writing on undergraduate degree routes, with the self-concept of learners, that might be considered *vocational* or *practical*. Initially, the observations were related to PGCE trainees from engineering backgrounds. However, it also became apparent from discussions with fellow academics, that there were similar issues around both confidence and ability to write at Masters Level within academic modules across other PGCE subject routes.

The literature review explores existing research and writing pertaining to the nature of M-Level writing on PGCE programmes and the experience on applied or vocational undergraduate degrees (in particular engineering).

Literature Review

'The engineering profession is, of course, well aware of the importance of communication skills to professional engineers...'

(Jenkins, Jordan and Weiland, 1993: 51).

The issues surrounding the varying demands and expectations of writing across professional and academic disciplines are by no means a new concept. As Jenkins, Jordan and Weiland (1993: 53) highlight, the focus of reading on Engineering undergraduate courses related to 'progress and technical reports' and writing 'examinations, problem solving, and technical research reports', whilst these might be grounded in academic research that can be 'several times removed from the original design experiment'. They also observed that engineers displayed a 'greater resistance to knowing that language mediates experience' (Jenkins, Jordan and Weiland, 1993: 68) than those with a background in the humanities. Some anomalies were observed in their study, such as Civil Engineers being required to write longer papers and Chemical Engineers writing very little (Jenkins, Jordan and Weiland, 1993: 53). This observation is analogous to empirical observations of PGCE Engineering, and design and technology (D&T), trainees. Jenkins *et al.,* also highlight the increased expectations on postgraduate Engineering students, which many undergraduate programmes did not appear to be preparing students for.

The validity of this source needs examination, as it was written in the context of North American universities in the early 1990s. However, professional

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dialogue with engineering senior lecturers in the Faculty of Technology and Environment from the same institution as the PGCE programme in this study supports the view that this is an enduring issue in engineering education in Higher Education (HE). Similar conversations with practising engineers and subject leaders from two other UK HEIs running the PGCE Engineering highlight a similar trend. This is not to say that the writing on engineering undergraduate degrees is at a lower level than on other programmes, but rather that the demands and expectations are different to those on PGCE programmes in the UK.

In a study of PGCE trainees studying at M-Level at the University of Leicester, Tas and Forsythe (2010: 2) observed that those from science and mathematics backgrounds were disadvantaged in comparison to peers from social sciences or humanities. North (2005, cited in Tas and Forsythe, 2010) found that ITT trainees from social sciences or humanities backgrounds achieved higher marks. Since the inception of the PGCE at M-Level, in the mid-2000s (Sewel, n.d.), the expectations of writing in initial teacher education have changed and, in the case of the HEI in this study, the academic modules have become generic across all *secondary* programmes. Empirical, anecdotal and research data (Jackson, 2009) suggests that the transition has been far from smooth. Both trainees and mentors in school placements were unclear as to the value and nature of teacher education at M-Level.

In discussing the future of teacher education for the 21st Century Cochran-Smith (2003: 25) emphasises the importance of 'unlearning', or deconstructing, oneself as a beginning teacher. She highlights the role of the teacher educator in facilitating this through inquiry and questioning processes in which beginning teachers develop. In a 'chicken or egg' manner Cochran-Smith asks '*Which comes first (or should come first) when people are learning to be teachers—the day-to-day stuff, the know-how for getting through the day, or, the inquiry approach, the reflection?'* The defuse and cyclic nature of teacher education is in stark contrast to the disciplines of science and mathematics (Tas and Forsythe, 2010) or engineering (Jenkins, Jordan and Weiland, 1993:53), in terms of academic writing.

Figure 1: Korthagen, Loughran and Russell's (2006) Seven Fundamental Principles

1. Learning about teaching involves continuously conflicting and competing demands;
2. Learning about teaching requires a view of knowledge as a subject to be created rather than as a created subject;
3. Learning about teaching requires a shift in focus from the curriculum to the learner;
4. Learning about teaching is enhanced through (student) teacher research;
5. Learning about teaching requires an emphasis on those learning to teach working closely with their peers;
6. Learning about teaching requires meaningful relationships between schools, universities and student teachers;
7. Learning about teaching is enhanced when the teaching and learning approaches advocated in the program are modelled by the teacher educators in their own practice.

A question might be raised about the nature of the PGCE at M-Level in the UK, and the appropriateness of the paradigm. Korthagen, Loughran and Russell

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(2006) in an analysis of ITT programmes in Australia, Canada and the Netherlands, identified seven fundamental principles (Figure 1), which reflect both the challenges and opportunities in the M-Level PGCE (Jackson, 2009; Tas and Forsythe, 2010; Bell, Wooff and Hughes, 2011) and provide a rationale for the development.

Picking up on the tensions in the expectations of initial teacher education in the UK and beyond, Boyd and Harris (2010) begin to outline the diffuse nature of initial teacher education, identifying challenges and potential barriers. Boyd and Harris recognise the many challenges that face beginning teachers, as well as arguing with the preconceptions of previous models of teacher education and the tensions for the teacher educator. This underlies a broader tension between teacher *education* and teacher *training* (Brown and Evans, 2004: 52; Crozier, 1999: 80-81).

'… there is a high correlation between self concept and achievement and this depends on whether they see their capabilities as being set in stone or malleable…'

(Race, 2007: 20).

Race identifies a correlation between learners' achievement and their conception of their capabilities. When considering the defined nature of subject knowledge in some undergraduate degrees and the necessary reinvention (Stronach, 2010) and "unlearning" (Cochran-Smith, 2003: 20) of previous modes of thinking, the challenge for the teacher educator is to know his or her trainees and the idiosyncrasies of their subject. The critical voice (Jay and Johnson, 2002: 79) of the beginning teacher is wrapped up in a new identity (Hyland, 2002) that is being formed during the PGCE year, and afterwards into his/her professional life.

Key questions from the review of literature relate to the nature of knowledge within curriculum disciplines, whether they are in subjects traditionally viewed as *academic*, *practical* or *vocational*. In the current political climate, where good subject knowledge is seen as being key to good teaching (DFE, 2010; Hattie, 2009: 113-114) the balance may be set to change in the coming months. However, the issue remains that ITT trainees do not enter the profession on a level playing field, either perceived or real in terms of their experience of academic or disciplinary writing. Whilst M-Level teacher education is the goal, the challenge for teacher educators is to adapt and differentiate (Tas and Forsythe, 2010) support for subject routes depending on the prior undergraduate experience in subject disciplines.

Research Methodology

Although the main research instrument used in this study was a questionnaire survey, the study fits within an interpretive paradigm (Denzin and Lincoln, 2011: 6), emerging from observation and interactions with ITT trainees. The

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data gathered was predominantly quantitative, with qualitative data being used to inform the interpretation and discussion of ambiguous questionnaire responses (Creswell, 2011). The assumption being made is that the nature of ITT trainees' prior experience of academic writing is, in some way, determined by the nature of their undergraduate experience; as determined by university (e.g. LJMU, 2010) and national (QAA, 2008) academic frameworks.

The epistemological tensions in this study are between the knowledge of a technical and applied nature obtained on applied undergraduate degrees (such as engineering), where subject knowledge is tangible through written examinations, technical reports and so forth (Jenkins, Jordan and Weiland, 1993) and therefore tends to be positivistic, and the more subjective approach of teacher education (Sewel, n.d.).

The main research method used to gather data in this study was an online questionnaire survey (Cohen, Manion and Morrison, 2011) deployed towards the end of semester one of the PGCE course, supported by participant observation (Jupp, 2006: 214-216) and document analysis (Jupp, 2006: 79-81) of trainees' reflective assignments. The location of the survey at this point of the course was to fall between the first and second academic assignments, both of which were components of the same module. Due to the small-scale nature of this study and limited population (330 PGCE trainees), a convenience sampling approach was adopted (Cohen, Manion and Morrison, 2011); the data from the survey being a non-probability sample, and should be interpreted in this context, and could be considered 'theoretical/purposive sampling' (Guba, 1981: 86). The intention being to capture a snapshot of perceptions, rather than to claim that the sample is representative of all ITE trainees.

The adoption of a mixed methods approach was a pragmatic response to changing circumstances. As outlined below, some of the data gathered through an online survey did not provide the clear-cut responses expected. Whilst this was an unexpected development, this became a rich opportunity for analysis. The initial study had emerged from an observed problem (Glaser and Strauss, 1967; Charmaz, 2006): that is, ITT trainees from specific PGCE routes underperforming in their academic work. The additional, qualitative, data was gathered and reflected upon, through face-to-face and email conversations with trainees and professional dialogue with colleagues regarding the receptivity of trainees on different subject routes on the PGCE programme to teacher reflection and the development of a professional narrative.

As a small-scale study, the data and interpretations should not be seen as representative of ITT trainees in England, not to mention the United Kingdom or internationally. The validity of the study, and its conclusions, should be seen in this context as a snapshot, contributing to the wider discussion around academic writing in teacher education.

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Findings and interpretation

Quantitative data

The online survey, in the form of a 23-point questionnaire, was trialled with colleagues and the research supervisor. The *initial* section of the questionnaire gathered background information, such as gender, ethnicity and the PGCE route they were enrolled on and previous undergraduate education. In relation to PGCE trainees' undergraduate education, we were interested in their experience of academic writing and the types of assignments. In addition to this respondents were asked to rate their confidence and understanding, using a five-point Likert scale (Likert 1932, cited in Cohen, Manion and Morrison, 2011) with the four overarching styles of academic writing employed on the PGCE programme: *essay*, *literature review*, *research* and *reflection*.

The *second* section of the questionnaire adopted, with permission from the author, 15 questions gauging 'Self-rated understanding and ability' (Jessen and Elander, 2009). The original study using these questions had compared students on Further Education (FE) and HE psychology courses. Although differing from a PGCE, the course as described by Jessen and Elander has similarities, in that it is often a new discipline for students. The questions were primarily adopted as useful and generic expectations of students by their academic tutors. However, the response to some questions in the original study showed a significant (more than 5%) drop in confidence between the FE and HE students surveyed. Whilst there was not a direct correlation between the experiences of some PGCE trainees in this study and Jessen and Elander's study, the questions resonated with the experiences of PGCE route (subject) leaders. There was a conservative self-assessment of confidence by the respondents in the PGCE trainees surveyed, somewhat analogous to the HE students in Jessen and Elander's study.

The survey was deployed electronically to 330 PGCE Secondary trainees in one HEI ITT provider in December 2010, with a response rate of 64 (approximately 19% of 2010/2011 cohort). The key data, with interpretation, is outlined below.

Table 1: gender (n=64)

Male	22 (34%)
Female	42 (66%)

The response rate of male to female trainees (Table 1.) was approximately one third / two thirds, which is in line with the overall composition of the course. Similarly, Table 2. indicates that a significant number of both male and female trainees commenced the PGCE from work, although the majority of those who came straight from their undergraduate studies were female.

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Table 2: Numbers of trainees commencing the PGCE from a degree or work (n=64)

	Male	Female	TOTAL
Degree	3 (5%)	18 (28%)	21 (33%)
Work	17 (27%)	21 (32%)	38 (59%)
Other	2 (3%)	3 (5%)	5 (8%)

Table 3. shows the response rate by PGCE Route (subject). The high response rates for the D&T and Engineering routes reflects the fact that these are the subjects lead by the researcher, and should therefore be born in mind when considering the validity and bias of the data. However, the study originated from these areas and a significant amount of the empirical data (observation and document analysis) gathered alongside the survey was used to interpret the responses. The intention was to compare responses between trainees who came from *academic* and *practical/vocational* backgrounds. This imbalance in responses was addressed through peer debriefings as professional and learning dialogue with colleagues from other PGCE routes (Guba, 1981: 85).

Table 3: Numbers on PGCE Route, by gender and overall (n=64)

	Total on Route	Male	Female	TOTAL
Applied Art	13	0	1	1 (8%)
Applied ICT	23	2	1	3 (13%)
Applied Science	9	1	1	2 (22%)
Engineering	7	7	0	7 (100%)
Leisure and Tourism	13	0	3	3 (23%)
Art and Design	19	0	1	1 (5%)
D&T	38	6	16	22 (58%)
ICT	21	1	2	3 (14%)
Maths	27	0	1	1 (4%)
MFL	24	0	6	6 (25%)
PE	66	4	6	10 (15%)
Science	70	1	4	5 (7%)

As the purpose of the survey was to investigate trainees' experience of academic writing, they were asked to categorise their degree as academic, practical or vocational (Table 4.), producing some interesting results. As expected the majority report that their degrees were academic in nature, with few owning the label 'vocational' (Table 5.). However, when the data was further interrogated there was no pattern or correlation between the PGCE route, undergraduate degree and self-reported 'type'.

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Table 4: Definitions of academic, practical and vocational presented in the questionnaire

Type	Description (used in survey)	PGCE Route (nominal)
Academic	largely theoretical or abstract knowledge	Modern Foreign Languages, Mathematics
Practical	largely applied or active learning, such as craft based or managerial	Art and Design, Design and Technology, ICT, Physical Education, Science
Vocational	largely education or training for a specific career path	Applied Art and Design, Applied ICT, Applied Science, Engineering, Leisure and Tourism

Table 5: Self-reporting of degree type (n=64)

	Male	Female	TOTAL
Academic	11	25	36
Practical	9	15	24
Vocational	2	2	4

The lack of correlation between trainees self-reporting of the type of undergraduate study undertaken begs several questions:

1. Did the respondents understand the nature of the question?
2. Is the nature of the undergraduate courses leading into specific routes genuinely broad?
3. Is vocational study viewed as a less desirable label amongst the trainees surveyed?
4. Did the respondents read the rubric explaining the categories?
5. These questions are difficult to address with any certainty within the parameters of this study and warrant further study or reflection.

Tables 6. and 7. indicate the range of most and least common forms of assignment experienced during undergraduate study. The most common form of assignment indicated were essays (26), followed by individual projects (16) and examinations (13). However, 13 of the 16 respondents for projects were PGCE D&T students (out of 22: Table 3) reflecting the nature of the degrees leading into the subject at PGCE. D&T respondents also reported the broadest range of assessment types experienced.

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Table 6: Most Common Assignment Format, by route and gender (n=64)

	Applied Art	Applied ICT	Applied Science	Engineering	Leisure and	Art and Design	D&T	ICT	Maths	MFL	PE	Science	Male	Female	TOTAL
3D artefact/product	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1
Digital artefact/product	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Essay	1	0	1	3	2	0	4	2	0	5	8	0	9	17	26
Examination	0	0	1	2	1	0	2	0	1	1	1	4	4	9	13
Group projects	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
Individual projects	0	1	0	0	0	1	13	1	0	0	0	0	5	11	16
Literature Review	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1
Reflection	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1
Report on practical activity	0	0	0	1	0	0	0	0	0	0	1	0	1	1	2
Research	0	1	0	0	0	0	0	0	0	0	0	1	0	2	2

Table 7: Least Common Assignment Format, by route and gender (n=64)

	Applied Art	Applied ICT	Applied Science	Engineering	Leisure and	Art and Design	D&T	ICT	Maths	MFL	PE	Science	Male	Female	TOTAL
3D artefact/product	0	0	0	0	2	0	1	1	0	0	2	2	2	6	8
Digital artefact/product	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Essay	0	0	0	0	0	0	1	0	0	0	0	1	2	2	4
Examination	0	0	0	0	0	0	9	0	0	1	0	0	2	8	10
Group projects	1	1	1	1	1	0	1	1	0	0	2	1	4	6	10
Individual projects	0	0	0	0	0	0	1	0	0	1	0	0	0	2	2
Literature Review	0	2	1	1	0	0	0	0	1	0	2	0	2	5	7
Reflection	0	0	0	2	0	1	5	0	0	0	3	0	4	7	11
Report on practical activity	0	0	0	1	0	0	1	1	0	2	1	0	2	4	6
Research	0	0	0	1	0	0	1	0	0	2	0	0	2	2	4

The least common forms of assessment produced a more level response, with two significant styles of writing (*literature review* and *reflection*) used on the PGCE Programme highlighted (Table 7.). The response of 4 identifying *Research* as least common (Table 7.) and only two as most common (Table 6.), might suggest that many trainees also have a limited experience of this type of assessment. Empirical evidence and feedback from trainees suggests that this is the case and that education research, in this instance *action research* (Cohen, Manion and Morrison, 2011: Ch.14), is a new concept from them to study. Whether this is due to their experience of research at undergraduate level, social stereotyping or understanding of research methods is unclear.

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However, this relative low response for research as a 'least common' assessment at undergraduate level does not transfer to responses in the four main writing styles employed on the PGCE programme (Table 8.). The responses suggest that this was not a perceived problem area for trainees (note that the survey was undertaken prior to the commencement of research module) in comparison to reflection. A five-point Likert scale was used to ask respondents to gauge their confidence. The mean response to the first three styles, essays, literature review and research, was just above the middle response (three) in the scale. However, the standard deviation (SD) for each question was significant, indicating the spread of responses. The most significant response was to the *reflective* style of writing, with the mean response below three and the SD 0.91. This highlights a significantly lower level of confidence in this style of writing, which confirms the initial, empirical, observations.

Table 8: Perceived confidence with the styles of writing

Writing style	Average (n=64)	Standard Deviation (σ)
Essay	3.39	0.88
Literature Review	3.02	0.98
Research	3.25	0.87
Reflective	2.92	0.91

The *second* section of the survey, based on Jessen and Elander's (2009) 15 question 'Self-rated understanding and ability' survey, picked up on this trend. As discussed at the beginning of this section, the interesting correlation was in the apparent drop in confidence within certain aspects of academic writing. The HE students' responses in Jessen and Elander's study, although not an ITT course, indicated a perceived lack of confidence interpreting the different requirements and expectations from tutors in comparison with the FE respondents. One analysis of this might be that impact of developing a critically reflective approach on the PGCE course leads trainees to be more aware of complexity than they were on their undergraduate programmes (Race, 2009; Cochran-Smith, 2003). The survey was also conducted shortly after receiving feedback on one of the first M-Level assignments, which could contribute to an increased sensitivity and awareness of the criteria (that they had been less conscious of beforehand).

Table 9. shows the level of understanding of respondents, using the five-point Likert scale. With the exception of question five, relating to the structuring of essays where respondents show the highest level of understanding (with the lowest SD), the average response for each question was between 3.14 and 3.98. In fact the average of the response averages was 3.51 with an SD of 0.25.

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Table 9: Perceived understanding of assessment criteria (n=64)

	Question	Ave	SD (σ)
1	I know what criteria are applied to my essays and written work.	3.50	0.85
2	I understand what the marking criteria mean.	3.53	0.80
3	I know I can meet the assessment criteria.	3.53	0.84
4	I know what is meant by 'addressing the question' in my essay.	3.98	0.85
5	I know what is meant by 'structuring' my essay.	4.03	0.73
6	I have a good idea how to structure my essay to ensure it addresses the essay title.	3.59	0.90
7	I know what my tutors are looking for when they judge whether I understand the issues…	3.27	0.90
8	I have a clear idea of how I can demonstrate understanding of theories and concepts…	3.28	0.92
9	I understand what it means to build an argument in an essay.	3.55	0.99
10	I have a clear idea what strategies I can use to build an argument in my essay.	3.14	1.01
11	I understand how to critically evaluate.	3.28	1.00
12	I understand what is considered appropriate evidence in my subject.	3.48	0.98
13	I know how to evaluate the quality of a book or journal or internet source.	3.48	1.01
14	I know how to detect bias in written sources.	3.33	1.07
15	I know how to cite and reference material appropriately.	3.59	0.99
	Average	3.51	
	Standard Deviation (σ)	0.25	

The SD for questions 9 to 15, however, indicates the wider range of responses, and therefore the understanding or confidence with the critical aspects of academic writing. When the average response for individual respondents was analysed (Table 10.), the results indicated that approximately half the sample reported a high (3.50 to 5.00) level of understanding of the criteria for assessment. However, when presented with the degree classification those with 2.2 degree classifications tended to report a higher level of understanding, with 75% self-reporting high levels of understanding as opposed to 45.5% of those with 2.1 degrees, or above. The four respondents who indicated that they did not have a UK degree classification were omitted from Table 10. Three of these were international students, educated outside of the UK.

Table 10: Understanding of assessment criteria in relation to degree classification (n=60)

	Perceived Confidence			
Degree classification	**High** (3.50- 5.00)	**Medium** (2.50-3.49)	**Low** (0.00-2.49)	**TOTAL**
2.1 or First Class (with Honours)	20 (45.5%)	20 (45.5%)	4 (9.0%)	**44**
2.2 or Third Class (with Honours)	12 (75%)	4 (25%)	0 (0%)	**16**
TOTAL	**32**	**24**	**4**	**64**

Qualitative data

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As discussed above, qualitative, observational, evidence gathered during the study, from individual trainees, revealed an underlying mindset in some. Trainees from disciplines where more linear, descriptive and quantitative approaches to writing (engineering, in this study) appeared to find it more challenging to make the transition to the more interpretive, provisional and qualitative approach of M-Level writing in this PGCE programme. On several occasions, discussions with trainees led to comments such as 'I feel as if I am being asked to waffle' (McLain and Pratt, 2012). A specific illustration of this was when one student (PGCE Engineering 2010/2011) talked about the subject matter on his undergraduate degree as being 'hard' whilst trying to reconcile a low grade for an essay and engage with the ambiguous nature of reflection on professional practice and critical analysis of literature.

Another PGCE Engineering trainee in the same cohort, who had failed the first PGCE assignment, identified two underlying issues relating to his understanding of what was expected. Through the reflexive dialogue, between trainee and tutor, it became apparent that the individual had been unable to engage with the *reflective process* and the *assessment criteria,* interpreting the assignment in the context of prior modes of writing experienced as an undergraduate.

Discussion

The barriers to effective writing at M-Level appeared to be different across PGCE routes, as reported by colleagues and supported by Tas and Forsythe (2010: 2). The idea that students from undergraduate disciplines that might be classed as more vocational or practical, such as those from Engineering (Jenkins, Jordan and Weiland, 1993: 53) find the transition to academic writing challenging is accepted by many teacher trainers as a truism. However, this study indicates some common issues across all PGCE routes. Whilst it is apparent that ITT trainees on practical routes, such as D&T, undertook degree courses where written assessment was less common, the range of styles of writing experienced by all of the respondents in this study was limited. Relatively few had experienced literature review or reflection as styles of writing, this being reflected in a lower level of confidence across all respondents. In terms of writing styles, if not confidence and experience with extended writing, this indicated that the initial perceptions of an 'uneven playing field' were less significant than expected.

The low self-reported confidence in relation to the expectations of M-Level writing on the PGCE may indicate a level of resistance to self-reinvention (from subject specialist to specialist teacher) amongst students from disciplines where there is a defined body of knowledge is analogous to the relationship between the trainee or newly qualified teacher (NQT) and the qualified teacher (Stronach, 2010; Kennedy, 1997:13, cited in Hattie, 2009:110).

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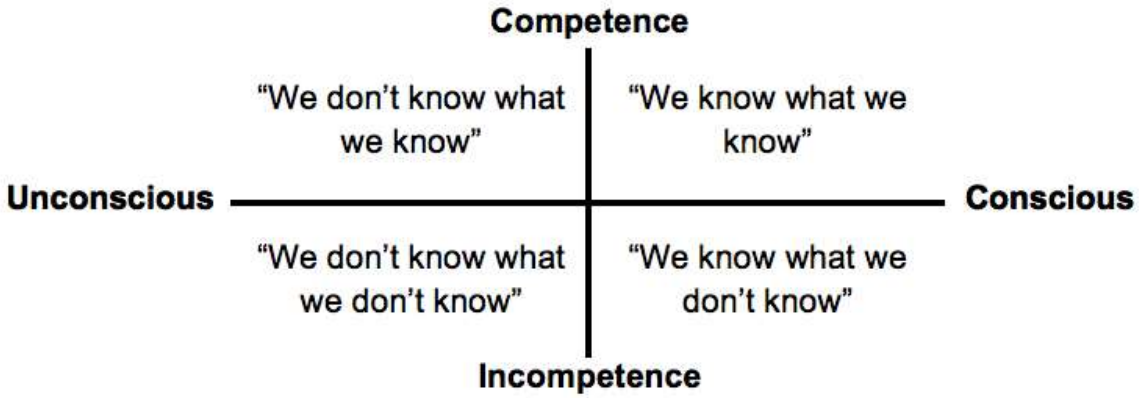
The relatively high level of self-reported lack of understanding of assignment criteria amongst trainees with 'lower' degree classifications (lower second and third class) in comparison with the more measured self-analysis amongst those with 'higher' classifications was notable. This is reminiscent of the Johari Window (Luft, 1982) and the Conscious Competence Matrix (Race, 2007: 17-20), which represents knowledge acquisition in terms of tacit and explicit knowledge against competency (Figure 2.).

Figure 2: Conscious Competence Matrix



Race (2007) highlights the role of feedback in enabling learners to move out of the 'unconscious/incompetence' or 'unconscious/competence' towards 'conscious/competence' or a more critically reflective mode of learning. The data suggests that these trainees may not be engaging with, or understanding, the assessment criteria.

This is reflected in the literature review above, and is supported by observed trainee behaviour, relating to writing, and performance in academic assignments. Trainees from disciplines, as described above, which require linear, descriptive, and quantitative approaches to disciplinary writing appeared to be less responsive to M-Level demands for a more interpretive, provisional and qualitative approach. The diffuse and cyclic nature of reflection, and self-evaluation, requires that the developing teacher evaluate their practice and reinvent themselves (McLain and Pratt, 2012; Jay and Johnson, 2002).

It is also noteworthy to highlight the inherent risk of relying on self-reported levels of confidence or competence. As the analysis of data in Tables 9 and 10 suggests an apparent disconnect between confidence in trainees' understanding of expectations and their academic achievement in their undergraduate studies. There is no suggestion that the level of ability or intelligence is in question from the quantitative data, but the qualitative data examined in this study indicates that the origin of this *disconnect* may lie in the modes of thinking and disciplines experienced prior to initial teacher

education (Tas and Forsythe, 2009; Jenkins, Jordan and Weiland, 1993). Without the combination of qualitative with the quantitative data the overall analysis and conclusions in this paper may have been limited and potentially one-dimensional.

Conclusions

Reflecting on the results of this study one might draw a number of conclusions. The empirical data, from which this study emerged, based on performance in academic assignments, suggested that trainees from practical or vocational background found M-Level writing more challenging: *therefore* (a) the programme should be altered to reflect the differences and play to students' strengths; or (b) the programme should introduce intervention strategies to support individual and/or groups of trainees. However, the quantitative data from the trainees in the survey may indicate a deeper issue around trainees' self-assessment of their understanding of the assessment criteria, where those whose attainment was lower in their undergraduate studies may have a tendency to over confident and overestimate their understanding and confidence.

These conclusions may arise from the limited nature of the data itself, requiring further study to investigate the link between prior attainment and self-assessment. However, the data does highlight the role that effective assignment preparation and feedback can make in enabling ITT trainees to engage with the demands of M-Level writing and reinvent themselves as teachers of a specialist subject, rather than subject specialists who teach.

The first proposition is not an option for consideration for the PGCE programme in this study, where a high level of academic writing is sought and the programme is generic across all routes. There is an inherent risk that preconceptions and stereotypes regarding teachers of practical subject might be reinforced. To quote George Bernard Shaw's, often misquoted, saying 'Those who can, do; those who can't, teach' (Shaw, 2000; Shulman, 1986: 4). Therefore the challenge is how to manage expectations and support the transfer from a range of undergraduate experiences on the PGCE programme.

The findings in this study are by no means conclusive, but they do raise a question about the usefulness of seeking trainees' comments on confidence in order to evaluate and inform planning and teaching, in isolation and without professional dialogue. The way in which data of this kind is used should be carefully examined and synthesised with wider observation and research, hence the choice to redefine the study early in the process as mixed methods, rather than quantitative and positivistic. This being the case, the next step following this study may be to conduct a study of the intervention strategies used to support and improve the quality of reflection, which create a bridge between specialist knowledge in a given subject and becoming a skilled teacher. The semantic difference between being a 'Design and Technology

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Teacher' and a 'Teacher of Design & Technology' (McLain and Pratt, 2012: 20), for example, provides an intriguing insight into the narrative of the trainee teacher over the PGCE year and how they view themselves. The contrast seems to be between standing 'inside' the subject and expounding it, as opposed to standing 'outside' in a more pedagogical relation that reflectively takes into account the complexities of the relationship between student, teacher and subject (Stronach, 2011). A passion for their subject is not an uncommon or unreasonable response for a beginning teacher. This is positive, but not enough.

The aim of these concluding statements are not to propose a generalist agenda for Initial Teacher Education, in place of a focus on subject knowledge, but rather the question choices about programme design and prompt discussion. The next step following this study would be to focus on the qualitative aspects of the problem through practitioner action research (Cohen, Manion and Morrison, 2011; Burton, Brundrett, and Jones, 2008) evaluating the impact of interventions to support academic writing on the PGCE. Any intervention would aim to address misconceptions, developing confidence in writing and self-conception as specialist teachers.

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