The Initial Teacher Education Research Project

Final Report

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Contents

Acronyms

BEd	Bachelor of Education degree
CAPS	Curriculum and Assessment Policy Statements
CHE	Council on Higher Education
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
FET	Further Education and Training Phase
FP	Foundation Phase
HEI	Higher Education Institution
HoD	Head of Department
IP	Intermediate Phase
ITE	Initial Teacher Education
ITERP	Initial Teacher Education Research Project
LoLT	Language of Learning and Teaching
MRTEQ	Minimum Requirements for Teacher Education Qualifications
NEEDU	National Education Evaluation and Development Unit
NQF	National Qualifications Framework
NQT	Newly Qualified Teacher
NSC	National Senior Certificate
PGCE	Postgraduate Certificate in Education
PIRLS	Progress in International Reading Literacy Study
SACE	South African Council for Educators
SET	Science, Engineering and Technology
SP	Senior Phase
TLDCIP	Teaching and Learning Development Capacity Improvement Project
UNISA	University of South Africa

1 Introduction

The Initial Teacher Education Research Project (ITERP) was initiated in response to growing evidence that poor learner performance in South African schools is due, in significant part, to many teachers' lack of understanding of and inability to adequately convey the content knowledge of the subjects they are teaching. Education research the world over is in increasing agreement that one of the most important determinants of educational quality is the competence of teachers. It follows that the professional education, training and development of teachers, particularly with regard to subject content knowledge and pedagogical content knowledge, is central to improving the quality of teaching.

While much is known about the very poor performance of learners at all levels of the South African school system (and indeed also at university), and while national and international assessments of teacher knowledge have suggested that many current South African teachers perform almost no better in language and Mathematics than the curriculum standard set for the learners they are teaching, there is little systematic knowledge about the quality of the new teachers who are being trained for and entering the system. Expanding our knowledge of new teachers and of the extent to which they are sufficiently knowledgeable, skilled and prepared to face the realities of working in South African schools is all the more important in the light of the need to bring all teacher education programmes in line with the findings of government commissions, the requirements of regulatory and quality assurance agencies and the evolution of education research, policy and practice over the past decade.

Initial teacher education plays a crucial role in ensuring that teachers are able to create an environment that best facilitates learning and that they have adequate subject content knowledge and knowledge of how to present this content to learners of different ages and aptitudes. Initial teacher education programmes also shape teachers' attitudes towards the profession of teaching and their individual identities as professionals. Unlike long-established professions like law and medicine, the teaching profession as yet lacks the ability to determine its own knowledge and practice standards and thereby control entrance to the profession. Such quality standards, to the extent to which they exist, tend to vary according to who is defining teacher professionalism; this is usually done by external agencies such as the universities which train teachers, the government departments which employ teachers and develop teacher education policies or the trade unions which defend teachers' rights. In response to these multiple influences on the quality of teachers as professionals, individual teachers also develop professionally on the basis of their own motivations to teach, their perceptions of their training and their early career experiences.

2 Aims of ITERP

The overall aim of ITERP – a collaboration between the Department of Higher Education and Training (DHET), the Department of Basic Education (DBE), the Education Deans' Forum, and JET Education Services – was therefore to gather up-to-date information on the state of initial teacher education (ITE), including:

- The initial professional development of student-teachers;
- The early work experiences of new teacher graduates;
- New teacher recruitment and career choices;
- New teacher placement and reception in schools; and
- New teacher distribution.

On the basis of this information, ITERP aimed to examine the extent to which the ITE programmes offered by universities are adequately preparing teachers to teach in South African schools, i.e., whether the knowledge and skills novice teachers acquire during teacher training programmes equip them for school-based teaching. At the same time, ITERP hoped to foster self-reflection among teacher educators and stimulate debate among policy makers and practitioners as important steps towards promoting best practice and informed decision-making and generally improving the quality of the content, structure and outcomes of ITE in South Africa. The long-term intention is to give impetus to the growth of the occupational field of teaching towards professionalism, an idea which finds a great deal of resonance both in South Africa and the wider international context at the present time (Taylor and Robinson, 2016).

3 Research questions

Informed by a literature review, ITERP developed and refined two core research questions, each accompanied by several secondary questions.

The *first core question* was: how are initial teacher education programmes preparing new teachers to teach in South African schools? More specifically, what knowledge and skills are student-teachers expected to acquire or develop during their studies, how are they supported during their teaching practice experiences in schools, and what kind of professional identity are student-teachers developing during their training?

The *second core question* was: are newly qualified teachers (NQTs) able to implement what they have learnt during their initial teacher education programmes? More specifically, do newly qualified teachers display the skills and knowledge needed to teach effectively, is their ability to teach effectively supported or constrained by the school teaching environment, how have they experienced the process of placement in schools, and what factors affect their deployment and retention?

4 Methodology

The first step towards answering these questions, and particularly the first core question, was to carefully select a number of public universities whose ITE programmes could be examined in detail. In discussion with the DHET and the DBE, five institutions, whose participation was voluntary, were selected using the following criteria: socio-spatial location (rural or urban); institutional history (formerly advantaged or disadvantaged); mode of programme delivery (contact and/or distance); and size (annual ITE graduations):

- University A, an urban, formerly advantaged university offering initial teacher education by full-time contact mode on a single campus;
- University B, an urban, merged (formerly advantaged and disadvantaged) university offering initial teacher education partly by distance and partly by contact on multiple campus sites;
- University C, a distance education university with regional centres throughout the country and which annually graduates the largest single proportion of new teachers;
- University D, a rural, formerly disadvantaged university offering initial teacher education by full-time contact mode on a single campus; and
- University E, an urban, merged (formerly advantaged and disadvantaged) university of technology offering initial teacher education by full-time contact mode on multiple campus sites.

Collectively, in 2012 these five case study universities graduated 7 437 (54.3%) of the country's total of 13 708 new teachers (DHET, 2013: 4).

ITERP proceeded to undertake, over a period of four years (from 2012 to 2015 inclusive):

- A set of surveys (of both final year student-teachers and new teacher graduates from all 23 public universities offering ITE and also, more specifically, of newly qualified Intermediate Phase (IP) teachers from the five selected universities);
- Case studies (of all ITE programmes at the five selected universities);
- Documentary analyses (of ITE programme, curriculum and teaching practice assessment material both in general and with a specific focus on IP Mathematics and English at the five selected universities);
- Interviews (with teacher educators and newly qualified IP teachers from the five selected universities);

- Focus group discussions (with newly qualified IP teachers from the five selected universities); and

- Assessments of subject and pedagogical content knowledge (of newly qualified IP teachers from the five selected universities).

In more detail, the ITERP studies included:

1. A literature review pertaining to the initial professional development of teachers, including teacher professional identity formation, motivation to teach, student-teachers' perceptions of teaching, teacher standards, teacher knowledge, teacher education programmes, student-teachers' experiences of teacher education, mentoring of student-teachers, student-teacher retention, new teacher placement, early teaching experiences, beginner teacher reflections on their teacher education, school culture and context, new teacher attrition, teacher induction and early professional development (Deacon, 2012);

2. A comparative analysis of all initial teacher education, i.e., Bachelor of Education (BEd) and Postgraduate Certificate in Education (PGCE), programmes at the five selected universities, including teacher educators' conceptualisations of teacher professional identity, programme structure and purpose, admission criteria, curriculum contents and coherence, the structure and function of teaching practice and forms of assessment (Deacon, 2013);

3. Comparative analyses of the BEd IP programmes, curricula and modules for Mathematics and English at the five universities (Bowie, 2014; Reed, 2014; Taylor, 2014);

4. A comparative analysis of the form and content of BEd teaching practice assessment instruments used by the five universities (Rusznyak and Bertram, 2014);

5. A survey of all final year ITE students at all public universities in 2013, including their educational backgrounds, motivations for becoming teachers, perceptions of teacher education programmes, confidence and preparedness to teach, teaching practice experiences and career plans (Deacon, 2015a);

6. A survey, in 2014, of all respondents to the 2013 survey, following up on their postgraduation status (employed as a teacher; studying; unemployed; or employed but not in teaching), including how those employed as teachers were placed in or found posts, the nature and length of their appointments, the characteristics of their schools and their teaching activities, professional development needs, experiences and future plans; what those who chose to study further were studying, why they decided to study and their future plans; whether those currently unemployed had briefly taught and, if so, what and for how long; and the nature of the work of those employed but not in teaching and why they had chosen not to teach (Deacon, 2015b).

7. A three-day symposium in 2015 with 30 newly qualified IP teachers which, through questionnaires, interviews, focus group discussions and assessments, investigated the perceptions of these NQTs regarding professional identity, the value and usefulness of their BEd programmes, their feelings when they first started teaching, their expectations and experiences of the schools at which they were teaching, how they were being utilised, how they were coping and how proficient they were in terms of their Mathematics and English subject and pedagogical content knowledge (Deacon, 2016).

Apart from, but underpinning these studies, ITERP collected a large quantity of rich and varied data which is available for further examination and follow-up studies by researchers, academics, donor agencies and policymakers interested in understanding and improving ITE in South Africa.

It must be borne in mind, however, that the ITERP studies, findings and data cannot be generalised to all universities, ITE programmes, student-teachers and/or newly qualified teachers in South Africa. In particular, a significant limitation of ITERP's census-style surveys was the under-representation of respondents from the university that annually produces the largest single proportion of new teachers, namely the University of South Africa (UNISA).

Nevertheless, the first ITERP survey achieved a response rate of 20% of the country's 2013 class of final year student-teachers, and this fairly substantial return was augmented and further enhanced through the follow-up second survey as well as the symposium by investigating these student-teachers' experiences subsequent to graduation. The fact that large numbers of survey respondents were trained on small town and rural university campuses also offers important and instructive perspectives from the poorer and more historically disadvantaged end of the higher education spectrum. Furthermore, the case studies of the ITE programmes and curricula at the five selected universities provide invaluable insights into the manner in which more than 50% of the country's new teacher graduates are being prepared, while the assessments of the subject and pedagogical content knowledge of newly qualified IP teachers extend these insights considerably.

Full details of the various research methods employed as well as particular study limitations can be found in the individual ITERP reports available at www.jet.org.za.

5 Findings

The remainder of this report explores ITERP's overall findings, focusing first on how new teachers in South Africa are being taught (the first three sections below) and then on how they are implementing what they were taught (the next four sections). An overall conclusion follows.

5.1 What knowledge and skills are student-teachers expected to acquire or develop during their studies?

All the case study universities placed great emphasis on equipping new teachers with sound knowledge of their subjects and of how to teach them, and this was readily evident in the preponderance of subject and pedagogical content knowledge modules in their ITE curricula, in the centrality of such knowledge and skills in staff conceptions of the professional teacher identities they aimed to foster among students and in the structure of most teaching practice assessment instruments. The vast majority of final year student-teachers underscored the importance of this emphasis, insisting that they were very confident and well prepared in these and almost every other teacher knowledge and skill areas.

However, the ITE programmes at most of these institutions evinced little structural or conceptual coherence, often seeming to lack a broader vision or logic which could inform and weld together the teaching of subject and pedagogical knowledge with curriculum requirements and the supervision of work-integrated learning in varying educational contexts.

At the level of individual modules, particularly in programmes preparing secondary school teachers (i.e. for the Senior Phase (SP) and Further Education and Training (FET) Phase) and also for the most part in Mathematics modules, there was much greater coherence and consistency. But this was not the case with most programmes training primary school teachers (i.e. the FP and IP), while many language and literacy modules were especially problematic in this regard. Compounding these general shortcomings in language and literacy instruction was the finding that one out of every seven final year student-teachers was speaking, hearing or reading very little if any English (Deacon, 2015a), yet will be required by most schools to teach using this language.

There were also wide variations between institutions with regard to subject and pedagogical modules. The content, duration and levels of cognitive demand of individual modules, the amount of time allocated to subject modules vis-à-vis methodology modules and the relationship between module credits and notional hours sometimes differed significantly, both within and between institutions.

Teacher educators were not always sufficiently acquainted with the structure of their ITE programmes as a whole, with the contents of individual modules other than the ones they were teaching or with national curriculum requirements. Across most case study institutions, there was often little engagement (although in some cases debates were

taking place) between those offering subject content modules and those focusing on pedagogy and classroom methodologies.

While subject and pedagogical knowledge were highlighted by most teaching practice assessment instruments, some of these instruments presented general pedagogical knowledge (regarding teaching strategies, classroom management skills and the use of learning and teaching materials) as a set of generic skills in the form of a checklist of atomistic criteria. They did not always emphasise that conceptual and reasoned thinking must underpin the choice of teaching and assessment strategies and that the pedagogical choices made must be appropriate to the content knowledge of their lessons (Rusznyak and Bertram, 2014).

Focusing in greater depth on ITE programmes and modules intended to prepare students to teach English and Mathematics in the IP, ITERP found that the extent, complexity and foci of the English subject and pedagogical knowledge being taught to IP teachers specialising in English also varied widely between institutions. These divergences were even more acute in relation to the preparation of those not specialising in English who were given very few opportunities to develop their English language and literacy skills. For instance, English modules for specialist English teachers constituted between 15% and 31% of the BEd degree, while those for nonspecialists took up between 5% and 8% of the degree (and in one case consisted entirely of a focus on academic literacy rather than English subject and pedagogical knowledge as such) (Bowie and Reed, 2016).

None of the universities were found to be adequately teaching new IP teachers how to teach reading and writing, not just in English but in any language, and this was compounded by the absence of a focus on children's literature in most ITE curricula. Nor was any university substantively addressing issues like how teachers should help learners navigate the Grade 4 shift in LoLT from home language to English, or deal with the challenge, especially prevalent in urban areas, of multiple home languages in a single classroom. Most institutions also did not give sufficient attention to the Curriculum and Assessment Policy Statements (CAPS) in their English subject and methodology modules (Reed, 2014).

Although IP English students were being taught how to identify and address barriers to learning, this appeared to be taking place largely through general modules on inclusive education, since there was no indication that any English subject or methodology module at any institution paid attention to this at the level of the discipline. In contrast, there were several indications of this for IP Mathematics students, with symposium participants across most institutions indicating that their Mathematics modules had emphasised identifying and accommodating different learning styles as well as utilising varied approaches to resolving potential difficulties.

The Mathematics subject and pedagogical knowledge being taught to IP Mathematics specialists also seemed much more consistent across institutions than was the case with English, in part reflected by the fact that almost all of the case study universities made

use (to varying degrees) of the same textbook. Most IP Mathematics subject knowledge modules for Mathematics specialists focused on both IP- and SP-level Mathematics and both common and specialised subject content knowledge and covered the full spectrum of cognitive demand. One university, however, focused exclusively on common subject content knowledge mainly at FET and university levels and generally at a lower level of cognitive demand, raising questions about how this institution's IP Mathematics specialists would become familiar with the routine IP level Mathematics that they would be presumed qualified to teach in schools (Bowie, 2014).

IP Mathematics generalists also seemed better off in comparison with Mathematics specialists than IP English generalists were in comparison with English specialists, although the advantage was not especially marked. Mathematics generalists generally spent much less time on Mathematics modules, especially methodology modules, than did specialists, although they often did some of the same modules as the specialists, the difference being that the level of cognitive demand was occasionally lower. At some universities, however, those not specialising in Mathematics either received no Mathematics methodology training at all, or what preparation they did receive was simply inadequate for what they would be expected to teach. Overall, all Mathematics modules for Mathematics specialists made up between 13% and 25% of the degree, and those for nonspecialists comprised between 3% and 13% (Bowie and Reed, 2016).

It follows that, with some prospective (IP) teachers being taught little to none of the subject knowledge and pedagogical knowledge necessary to teach English and Mathematics (whether or not they were specialising in those subjects), and with even subject specialists at some institutions receiving very modest proportions of the total programme instruction time available (as little as 13% in Mathematics and 15% in English), the quantity and quality of the knowledge and skills that some ITE programmes are providing student-teachers leave much to be desired.

These findings are especially alarming in the light of teacher educators' oft-stated concerns that students are exiting basic education and being admitted to ITE programmes with extremely low levels of subject knowledge and of literacy and numeracy in general. Yet admission requirements for ITE programmes are generally lower than for most other entry-level degree programmes. Formally, applicants for the typical entry-level qualification, the BEd degree, require a national senior certificate (NSC) pass (with degree endorsement) worth between 24 and 34 'admission points' inclusive,[1] whereas applicants for science, engineering, commerce and law programmes commonly require 40 or more points, depending on the qualification and institution. In practice, however, the case study institutions do not appear to always insist upon even these comparatively low requirements. Most alarming in this regard is the finding that almost 40% of final year student-teachers who responded to the ITERP survey in 2013 had been admitted to their ITE programmes without having achieved a matriculation pass with the required degree endorsement (Deacon, 2015a).

[1] For the other entry-level qualification, the PGCE, applicants must have a degree (or an appropriate diploma) which is usually expected to include two school teaching subjects passed at second year university level (NQF level 7).

Moreover, applicants to ITE programmes are admitted largely without reference to their levels of literacy and numeracy, their interpersonal and communications skills, their motivations to become teachers or evidence of their interest in children. Selection of applicants on the basis of such characteristics is, international research suggests, a hallmark of top-performing school systems (Mourshed and Barber, 2007: 17; see also Sahlberg, 2012). That said, ITERP did find, encouragingly, that the vast majority of final year student-teachers emphasised altruistic and intrinsic reasons for wanting to become teachers, saying that they 'liked working with children' and aiming to 'make a difference' by 'improving the quality of education' and 'sharing their knowledge'.

With little evidence of the existence of any other means of choosing amongst ITE applicants, such as interviews or entrance tests, and with all institutions annually receiving more applications than they can accept, the most important selection mechanism (other than a matriculation pass, in the case of the BEd, and requisite school subjects, in the case of the PGCE) would appear to be the limited number of university places available. A situation where demand for places outstrips supply might be seen as ideal for the introduction of quality assurance mechanisms, but this does not yet seem to be the case. On the contrary, in fact: ITERP findings also suggest that the production of new phase-specific specialists is oddly lopsided, being heavily concentrated in the FET Phase, with the FP and IP receiving the fewest numbers of new recruits. An additional concern is that this apparent overproduction of secondary school teachers does not measure up to the highest standards of quality, as suggested by findings that, for example, almost two thirds of NQTs currently teaching FET Mathematics felt a need for further subject knowledge preparation (Deacon, 2015b).

5.2 How are student-teachers supported during their teaching practice experiences in schools?

The work-integrated learning or teaching practice component of ITE programmes also exhibited substantial variations between universities in terms of duration, organisation, the quality and content of learning experiences and the form and nature of assessment.

The survey of the student-teacher class of 2013 indicated that, during their final year, the majority (between three-fifths and two-thirds) of students had spent more than six weeks on teaching practice and at least three weeks during the previous year; but because they were not asked to indicate how much time they had spent on teaching practice over their entire degree, it is not possible to assess whether the quantity of time spent in schools approximates government policy expectations.[2] Nevertheless, there appeared to be no common standard as to the length of teaching practice, with the total amount of time being reported by institutions varying significantly, from 10 to 35 weeks (Deacon, 2013).

[2] The *Minimum Requirements for Teacher Education Qualifications* of 2011 stipulated 16-24 weeks on teaching practice for the BEd (including a maximum of 10 weeks in any given year) and 6-8 weeks for the PGCE (DHET, 2011: 25-28). These minimum requirements were revised as of 2015 to require 20-32 weeks for the BEd (including a maximum of 12 weeks in any given year) and 8-12 weeks for the PGCE (DHET, 2015a: 23, 29).

The quality of this time spent on teaching practice, moreover, is questionable. For instance, there appears to be insufficient variation in school placements; in some cases students may simply not be getting enough practice, or no quality practice, or may not be fully exposed to the everyday requirements of being a teacher; and the quantity and quality of supervision – and sometimes the complete lack of supervision due to the literal physical absence of a supervisor – is especial cause for concern.

Despite the importance of exposing prospective teachers to South Africa's varied and contrasting schooling contexts, information provided by all except one (the most rural) of the case study institutions showed that the schools they used for teaching practice placements were predominantly in suburban locales. Data from the final year student survey indicated that across the ITE sector, school placements were skewed towards suburban and, to a lesser extent, township schools (in the case of more urban campuses) or towards rural and farm schools (in the case of more rural campuses). It is common practice for students to be allowed to nominate the schools in which they will be placed, to choose a school from a list or to place themselves in schools; a diversity of possible experiences is thus neither obligatory nor purposefully structured, but partly dependent on student predilections. One possible consequence of this was the finding that few white students (just a quarter of ITERPs' white final year respondents) expressed confidence about teaching in a township, while a third of ITERPs' African respondents would not want to teach at a suburban school for the same reason (Deacon, 2015a).

Almost a fifth of student-teachers reported formally teaching classes for less than an hour a day during teaching practice in their final year. This is scant preparation considering that, within a year (if they manage to obtain teaching posts) they will be expected to take on full teaching loads of several hours a day. Most also spent very little time (less than an hour a day on average and possibly no time at all in some cases) observing and learning from how experienced teachers teach.

Many student-teachers felt that teaching practice had not sufficiently exposed them to authentic classroom contexts. Looking back on their teacher training, a common refrain amongst NQT symposium participants was how unprepared they were for the heavy administrative workload and the pressures of managing large classes (Deacon, 2016); and over a third of NQTs currently teaching felt that they needed more training or support with regard to these two areas (Deacon, 2015b).

There were substantial differences between university campuses in the proportions of respondents who received feedback either from supervising teachers, from HoDs and principals or from university supervisors. On some campuses, twice as many respondents received feedback from university supervisors than did respondents on some other campuses; and students from some formerly disadvantaged institutions were much more likely to receive feedback from Heads of Department (HoDs) and principals than were students from some formerly advantaged institutions (Deacon, 2015a). It could be hypothesised that what some students are learning or being exposed to on teaching practice is very different from what others are learning (and they are also learning from rather different education stakeholders in sometimes very different

places), in part due to the mere accident of choice of campus (and for many, poverty and geography mean that they have no choice, even in this).

On the whole, student-teachers tended to get slightly more feedback during teaching practice from supervising teachers than from their university supervisors and also rated teachers' feedback more highly. But of particular concern was the finding that some received no feedback at all – not from a teacher, not from an HoD or principal and not even from a university supervisor. Leaving aside the fact that feedback is an indispensable learning mechanism, every professional university degree programme needs to be able to guarantee that each and every one of its students will receive a minimal level of properly supervised work-integrated learning.

Furthermore, assessment, like feedback, needs to be informed by and specific to the actual content of the particular subject matter being taught. But only one institution indicated that the majority of its students on teaching practice were being assessed by specialists in the subjects they were teaching; in most cases, logistical difficulties and high student-staff ratios meant that students were assessed by whoever was available – and in a few instances no formal assessments took place at all (Deacon, 2013).

The teaching practice assessment instruments used by all case study universities characterised teaching as an integrated, holistic practice with both cognitive and performance dimensions, thus highlighting the need for the quality and coherence of the student's teaching to be such as to enable learning. With regard to subject content knowledge and pedagogical knowledge, the instruments were found to be remarkably consistent across institutions, emphasising that students need to demonstrate the capacity to make context-specific professional judgements on the basis of the content being taught and learner understandings thereof. However, this integrated conception of teaching was often counteracted by a tendency for discrete marks to be awarded for each assessment category or criterion, thus creating the impression that teaching consists more of a set of separate routines than an interrelated whole (Rusznyak and Bertram, 2014).

ITERP also found that the assessment instruments' indicators of competence were insufficiently explicit and lacked the detail needed to provide adequate formative and motivational feedback to students. Some NQTs picked up on this and called for assessors to more precisely specify what a student had not done or could have done better, instead of just awarding an overall percentage mark. Another, perennial, difficulty is that although assessment instruments are very similar across universities, assessors' conceptions and practices are not. Most of the present university supervisors and supervising teachers were trained during apartheid, when the structural fragmentation of ITE obstructed the emergence of any consensus about what constitutes effective teaching; but the post-apartheid integration of ITE and its centralisation in the university sector has not yet promoted such a common understanding amongst either teachers or teacher educators (Rusznyak and Bertram, 2015).

5.3 What kind of professional identity are student-teachers developing during their training?

There was a close correspondence between teacher educators', student-teachers' and newly qualified teachers' views of teacher professional identity: teachers should be knowledgeable about what they teach, caring and ethical in their relations with others, passionate about their work and exemplary in their conduct. This conception was evident not just in surveys and interviews but across the ITE programme documentation at all the case study universities. Teaching practice documentation often included sections specifically assessing students on their professionalism, and all teaching practice assessment criteria made reference to the manner in which students conducted and presented themselves, to the extent of intimating that teaching requires a particular personality type: someone who is confident, enthusiastic, respectful, cooperative and supportive.

Indeed, while all teaching practice assessment rubrics stressed the importance of teacher knowledge and skills, there was a clear sense that being a professional required both specialised knowledge and specialised behaviour: it was not enough to be able *to do* what teachers do, one needed *to be* a teacher. Student-teachers' expressed motivations to teach seemed to echo this, giving much greater emphasis to aspects like 'wanting to be a teacher', 'liking children' and 'making a difference' than to more mundane occupational characteristics like job security and satisfactory working conditions.

5.4 Do NQTs display the skills and knowledge needed to teach effectively?

ITERP did not observe and assess NQTs actually teaching, but on their own account, many NQTs did not feel sufficiently prepared to be able to teach effectively without receiving further training. The results of the assessment of the English and Mathematics knowledge of 30 newly qualified IP teachers who participated in the ITERP symposium suggest that this is indeed the case.

Final year student-teachers had put themselves forward as overwhelmingly positive about and supremely prepared for their incipient school teaching careers, with almost all of them confident or very confident of their knowledge of the subjects in which they had specialised. One year later, however, as newly qualified teachers actually teaching in schools, their concerns about their subject knowledge and about their ability to teach using the LoLT of their schools (predominantly English) were palpable.

It is instructive to juxtapose final year student-teachers' feelings of preparedness versus the extent to which these same respondents, once employed as teachers, felt a need for further training and support. Whereas about 9 out of 10 final year student-teachers felt entirely self-assured in their subject content knowledge, once they had spent a year teaching in a school, 5 out of 10 of these respondents wanted more training and support in this regard; similarly, whereas some 8 out of 10 student-teachers were fully confident with regard to assessment and also classroom management, one year later around 4 out of 10 of these now NQTs wanted further development or assistance in both these

respects. And almost two thirds of NQTs felt that they needed more professional development in teaching using the LoLT of their schools, despite proclaiming, in almost the same breath, their vast self-confidence in this regard (Deacon, 2015a, 2015b).

The 30 symposium participants offered an even more sober self-assessment, with more than a third feeling that their teacher education programmes had not prepared them well enough for the work they were now expected to do; this is a far cry from the 97% who in their final year of study who had felt sufficiently, well or very well prepared to teach. If the overall preparedness of this small sample of brand new IP teachers is even slightly reflected in their rather mediocre English subject and pedagogical knowledge (for which they averaged 66% on the ITERP test) and downright poor Mathematics subject and pedagogical knowledge (an average of 56%), this should be cause for concern amongst the government departments whose policies require these teachers to be soundly prepared to teach both these subjects, the universities who certified them as such and the school principals who will assume this to be the case (Deacon, 2016).

Symposium participants also tended to recollect having more negative than positive teaching experiences during their first few months on the job, with most encountering for the first time the full extent of the curriculum workload and feeling particularly disconcerted by the everyday demands of school administration and the need to teach scores of learners at a time. Notwithstanding these challenges and the consequent decline in their feelings of self-efficacy over a relatively short period of time, most NQTs nevertheless remained positive on the whole and even optimistic that they could at least approximate their conceptions of a good teacher in their particular teaching contexts. Although over half of all NQTs currently teaching said that there were not enough learning materials for all their learners, they themselves did not often complain about a lack of resources. They did, however, feel decidedly under-prepared for the scale of their learners' academic and other needs (including learners' difficulties in speaking, writing and understanding the LoLT), but nevertheless were trying to adapt by applying a range of teaching strategies acquired during their initial teacher education. They were also cognisant and reflective of their strengths and weaknesses; hardly any of them regretted their decision to become a teacher; and relatively few seemed inclined to leave the profession.

5.5 To what extent is NQTs' ability to teach effectively being supported or constrained by the school teaching environment?

On the one hand, it is clear that the vast majority of NQTs received and felt that they benefited from the support of fellow teachers at their schools, particularly from senior colleagues and (where they existed) professional learning communities. Most also spent at least a couple of days being formally inducted into their schools, and almost three quarters received mentoring (although it is not clear how effective this initiation was in assuaging their feelings of under-preparedness). On the other hand, support from external education officials (such as curriculum or subject advisors) or the South African Council for Educators (SACE) was negligible. Moreover, NQTs who did not receive formal induction were also far less likely to receive mentoring, which no doubt reflects

how low levels of overall organisation at particular schools impact negatively across all their operations.

More importantly, there were particular aspects of the school teaching environment which almost certainly constrained and may even have undermined NQTs' ability to teach effectively. NQTs reported often being required to teach subjects and in phases in which they had not specialised. The fact that this phenomenon seems more common at primary school level may be in part a consequence of the relative overproduction of secondary school teachers (in that there are relatively fewer places for such teachers at the levels for which they have been trained). For instance, among 776 NQTs in their first year of teaching in 2014, 189 found themselves teaching in the IP, although almost two-thirds of these had not specialised in this phase; and of the same 776, over two-fifths of the English specialists and more than a quarter of the Mathematics specialists were not teaching those subjects, even while these subjects were being taught by nonspecialists at other schools (Deacon, 2015b).

Apart from this mismatch between what new teachers are being trained and becoming qualified to teach when at university and the grades and subjects they are being assigned to teach once in the schools – a mismatch whose extent may suggest that the problem is not confined to new teachers but prevalent to varying degrees across the system – it appears that the prevailing culture at some schools or among some groups of teachers also directly inhibits some NQTs' ability to teach effectively. Several symposium participants indicated that they sometimes felt pressurised by other teachers not to give of their best when teaching, while other interviewees referred anecdotally to being bullied by older teachers – some of whom were said to feel threatened by and consequently to refuse to support harder-working, 'know-it-all' graduates – or mentioned that they feared they would be victimised if they spoke out.

5.6 How have NQTs experienced the process of placement in schools?

Almost half the NQTs surveyed indicated that they had placed themselves in schools, finding out about available teaching posts from the schools themselves as well as from family and friends and then applying for these posts directly. Provincial and district education officials and bursary providers were responsible for arranging an additional two-fifths of all new teacher placements (Deacon, 2015b).

Word of mouth thus appears to account for a large proportion of placements, suggesting that the employment of NQTs lacks coordination and planning, with the onus being mostly on the job seeker rather than there being a clear official strategy as to what kinds of new teachers – with their particular subject and phase specialisations – are most needed or best placed where.

The fact that hundreds of newly graduated teachers are unemployed or seeking employment elsewhere, mainly because they are not informed of or cannot find (and in some cases are even dissuaded from seeking) teaching posts, is undoubtedly a direct consequence of this lack of coordination on the part of provincial education departments as the primary employers of teachers. Such bureaucratic incapacities,

moreover, are exacerbated by the existence of vested interests at all levels of the education system (associated with the persistence of unaffordable provincial post-provisioning practices, the bloating of personnel costs, the appointment of unqualified people to fill teaching posts and school, union, local community and/or teacher refusal to conform to policy regulations) (DBE/DHET, 2011: 40-42; DBE, 2013a: 7-8).

In short, it can be said that processes for placing NQTs in schools are inefficient. Without minimal administrative efficiencies, much initial teacher education is therefore little more than education for graduate unemployment. Furthermore, the lack of coordination, coupled with the tendency for most new teachers who do find teaching posts to do so in the same province in which they studied and matriculated (Deacon, 2015b), means that the quality of the new teachers entering the system will be both heavily regionalised and strongly reflect the quality of the ITE programmes in that region. This is likely to favour already advantaged, often more urbanised regions, provinces and their schools at the expense of poorer and often rural regions, provinces and schools and help reproduce the socio-economic inequalities which characterise almost all aspects of South African life.

5.7 What factors affect NQTs' deployment and retention?

Although ITERP did not directly investigate attrition amongst new teachers or why they might remain at or leave a particular school, it did find that student-teachers and NQTs alike strongly indicated their intentions to remain in the teaching profession, at least in the short term. However, almost half of student-teachers surveyed did not plan to make a career of teaching; and if one factors in the number of teacher graduates who were found to be unemployed, employed elsewhere or studying further or who had become de-motivated about teaching, only a bare majority of brand new teachers can be considered firmly attached to the occupation for which they have been trained.

Findings also revealed a fair degree of new teacher turnover and inter-school mobility, with around one in seven employed NQTs having already moved on to a second teaching position within a year of graduating, and many (just over half) of the unemployed NQTs having been briefly absorbed into and then expelled from the system within the same period of time (Deacon, 2015b). Follow-up research will be required to determine to what extent the schooling system is capable of retaining the new teachers that it cannot even fully take up and who are being produced in ever increasing numbers by the universities.

6 Conclusion

Six years ago, the Council on Higher Education (CHE) exhorted the country's teacher educators, as those "responsible for imparting the *how* and the *what*, and the theory and the practice of teaching", to urgently apply their minds to the question of "what needs to be done to improve learning at our schools" (CHE, 2010: 139, emphasis in the original).

Having reviewed many of the initial and continuing teacher education programmes on offer and finding that fewer than half were immediately worthy of full accreditation, the

CHE concluded that several things were required for the teacher education system to be able to "truly respond to the country's needs". Some of these requirements have since been attained: a stable, post-merger set of higher education institutions; a flexible teacher education qualification policy – the Minimum Requirements for Teacher Education Qualifications (MRTEQ); and a stable school curriculum – CAPS. Others are only partly or still remain to be achieved: the generation of sufficient reliable data to permit coherent planning around teacher supply and demand issues; "a conversation about the teacher of tomorrow"; and a need to "attract the best possible candidates for the profession" (CHE, 2010: 151).

Perhaps it can be said that the ITERP, but more especially its participating case study universities, stakeholders and funders as well as its offshoots, principally in the form of the Teaching and Learning Development Capacity Improvement Project (TLDCIP), aimed at developing research-informed knowledge and practice standards for BEd programmes in literacy and numeracy at primary school level (DHET, 2016), have begun to contribute in a small way to the CHE's proposed "structured conversation among the academic fraternity on the academic appropriateness and national relevance of [teacher education] qualifications" (CHE, 2010: 151).

But notwithstanding these developments and other undoubted improvements in the quality and quantity of teacher education provision over the last few years, ITERP findings indicate that the overall quality of initial teacher education remains questionable. The main findings can be summarised as follows.

On the positive side, there was widespread agreement amongst the five case study universities and amongst their teacher educators, student-teachers and recently qualified teacher graduates as to what it means to educate an educator. There was also consensus on the importance of new teachers being equipped with strong and effective subject and pedagogical knowledge and skills and generally exhibiting desirable personality traits such as confidence and enthusiasm. Negatively, however, the substantial variations between the five universities as to how they sought to realise their shared conception, with regard to both how they go about preparing their students and how these students fare once employed as teachers, suggest that there is a sizeable gulf between their expressed ideals and the implementation and results of their endeavours.

In brief, the ITE programmes at few of the five universities currently training the majority of the country's new teachers were structurally and conceptually coherent. Admission requirements were low, and selection mechanisms were weak. The depth and breadth of instruction and learning in subject and pedagogical knowledge varied widely; the relevance and value of some programmes and modules was problematic, with their quantity thin and their quality poor; and work-integrated learning (teaching practice) was inadequate, characterised by limited and skewed exposure to prevailing school practices and conditions, insufficient and inexpert supervision and inconsistencies in the amount and quality of feedback and assessment.

This under-preparedness took an immediate and discernible toll on the (curiously inflated) confidence of those graduates who succeeded, often without the assistance of government bureaucrats, in finding employment in a public school where, moreover, their specific subject- and phase-related knowledge and skills would all too frequently be disregarded. Not only were many of these 'teachers of tomorrow' at the time of their study applications not 'the best possible candidates for the profession', but now they were expected to bring their sometimes substandard training, albeit bolstered somewhat with a certain amount of induction, mentoring and other support (laced with a little collegial coercion) from fellow teachers, to bear on the daunting task of engaging with large classes of educationally deprived learners.

Yet despite the disparities – often significant – as to the form, content, depth, breadth, length, quantity and quality of different universities' ITE programmes and modules, all these institutions purport to be providing the student-teachers who pass through them with a sufficiently rigorous basis to improve the quality of education in South African schools. And despite some equally glaring flaws in the manner in which provinces and schools coordinate, place, welcome, utilise and generally manage new teacher graduates, their education officials would have us believe that these skilled graduates are being gainfully and usefully employed for the good of the country's learners.

What, then, could be done better or differently to improve learning in our schools, at least as far as initial teacher education is concerned? As the CHE (2010) suggested, a first step would be to closely interrogate the appropriateness and relevance of all existing ITE programmes so as to support, share and, where possible, replicate identified best practices amongst all the universities. It is worth noting that while the country has taken twenty years to settle on a national school curriculum (CAPS), which together with government policies and regulations should (and to some extent does) guide what universities include in their ITE programmes, there is no common or core national ITE curriculum. Although the ITE programmes at all of the case study universities invariably included a number of compulsory modules with similar names and/or similar foci, as well as an extensive range of subject- or phase-specific content and methodology modules, universities and especially individual lecturers have a great deal of autonomy in choosing and deciding how to teach the precise content of these modules. If, then, as a Ministerial Committee recently proposed, "a national course framework for new teacher training [should] be adopted which all [higher education institutions] HEIs will be required to adhere to" (DBE, 2013b: 43), what should be the structure and content of such a framework and how should it be operationalised? How much and what kinds of subject, pedagogical and practical knowledge and skills should new teachers be taught? How should this knowledge be taught, by whom, through which modalities and in which contexts?

These questions, and indeed the desirability and feasibility of a national ITE curriculum, can only be answered in the course of robust debate amongst teacher educators and other education stakeholders. It seems likely, however, that the nature of the interface between universities and schools, as the two key agencies involved, will figure prominently in any such debate, and at the core of this interface, in turn, is the labour-

intensive learning experience known as teaching practice. Teaching practice takes time and planning and costs money and effort to traverse the distances between university campuses and those schools which deign to accept students, can accommodate their phase and subject specialisations and are functional enough to do so effectively; both students and supervising staff may require transport, accommodation and other support; and mentor teachers and additional supervisory staff hired to supplement university lecturers (often over-stretched due to high staff-student ratios as a result of government pressures to produce more teachers and institutional pressures to boost subsidies and research rankings) usually require training. Over and above these considerable logistical challenges, it is necessary to develop and maintain shared understandings and practices among all concerned with regard to the nature and extent of feedback and assessment.

ITERP findings suggest that universities and schools need to work together in a much more planned and coordinated manner with regard to providing student-teachers with authentic school and classroom learning experiences. ITERP's symposium participants' criticisms of the usefulness, practicality and relevance of their initial teacher education constituted neither a disparagement of 'theory' nor a lauding of 'practice', but they do suggest a need for *better* (and especially more evidence-based and contextually applicable) theory, as well as *better* (and more purposively structured, subject-specialised, supported and supervised) practice. Much closer cooperation between universities and schools is essential in order to maximise both the application of knowledge learned and reflection on practice performed; and such cooperation will undoubtedly be enhanced to the extent that it is capably and efficiently supported and monitored by national and provincial education officials.

Universities may not be able to ensure that brand new teachers know everything about their subjects and how to teach them and are prepared for all circumstances during their first year of teaching – but they could certainly ensure that they are more adequately prepared than ITERP's respondents appeared to be. Granted, ITERP's respondents were not representative of all NQTs and were assessed only in English and Mathematics, and it is possible that the average NQT's subject and pedagogical knowledge in these and other subjects is much higher than ITERP found. Further research is needed, based on a representative national sample, to establish benchmarks of what new teachers do know and can do so that teacher educators can develop or modify their ITE programmes in the light of this more substantial evidence.

Nevertheless, as qualified professionals, new teachers should have no difficulty in teaching any aspect of the CAPS curriculum for the subjects in which they have specialised – including, in the case of IP teachers, the full range of IP subjects in which they are expected to be competent. New teachers must be flexible enough to adapt to changing curriculum requirements – but above all they must be capable of teaching the current curriculum; they ought to be thoroughly familiar with and able to teach using the LoLT of their schools (which in most cases is English); and they can and should be more methodically prepared for the heavy administrative workload and the pressures of managing large classes.

At the same time, the schools which host student-teachers are unlikely to be able to teach them more about their subjects and how to teach them under all possible circumstances than universities are doing at present – but their contributions to quality ITE could be substantially improved. Processes whereby schools are selected by universities for teaching practice placement purposes as well as the manner in which university supervisors and mentor teachers are chosen need to be much more purposefully structured, and supervisory, mentoring and assessment practices need to be formally monitored and evaluated. The same applies to processes through which newly qualified teachers are informed of the availability of teaching positions and thereafter received, inducted and mentored by schools during their first year or more of teaching.

Wherever possible, student-teachers need to be exposed to a range of schools in diverse contexts, with varying and suitably challenging conditions, under the auspices of appropriate university supervisors (who really need to be specialists in the subjects of the students they are supervising) and dedicated teachers (who really need to be trained mentors) in order to ease in advance the shock that NQTs experience in their first months of teaching and thus to narrow the gulf between their expectations and reality. It is especially important to note that, according to government policy (DHET, 2015a), while work-integrated learning (or teaching practice) must take place in 'functional schools', these are not necessarily schools with a certain minimum level of resources and facilities; they do not need, for instance, to have high pass rates, let alone electricity or water. It is worth quoting the policy definition in full:

> Functional schools are schools which consistently strive to ensure that their learners achieve their full potential, despite challenging conditions that may exist. These are schools which understand the role that they need to play to support the development of the student teachers that they host, and which show commitment to playing this role (DHET, 2015a: 19 fn 5).

In short, to participate in ITE, schools need only a sufficient level of awareness of and commitment to the educational advancement of both their learners and the student-teachers they host.

This definition of a functional school explicitly states that 'challenging conditions' should not exclude a school from consideration for teaching practice placement purposes; on the contrary, exposure to some such conditions ought to be considered a training requirement. That said, challenges are not the only things to which student-teachers need to be exposed, and it is likely that any school displaying such 'awareness and commitment' will also evince a certain degree of competence on the part of its management and teachers. Arguably, too, it will not be sufficient for a school merely to 'strive', 'understand' and 'be committed': over time, such endeavours need to translate into reality, with demonstrable learner achievement and actual and discernible support for student-teachers. It is in this sense that the wording of the policy is particularly instructive, because it alludes (perhaps unintentionally) to a much broader, education system-wide issue which appears to defy explanation. This issue is a disjuncture or gap

between perceptions and reality or, differently put, between aims and outcomes or efforts and results.

As already mentioned, in ITERP findings this disjuncture takes the form of a discrepancy between the incredibly high reported self-confidence and feelings of self-efficacy of final year student-teachers and their rather average actual abilities, both reported and assessed, once they begin teaching. ITERP also found that there seemed to be little connection in the minds of some prospective teachers between being trained to teach and having the ability to teach: almost all of those (very few) who said that they felt poorly prepared by their ITE programmes still felt confident in their abilities to teach effectively (Deacon, 2015a). Furthermore, most NQTs did not think it at all inconsistent to feel highly confident in teaching using their schools' LoLT even while calling for more training or assistance in this regard (Deacon, 2015b).

Several other pieces of South African research have documented this phenomenon amongst both newly qualified and established teachers, who, despite the generally poor quality of their learners' academic performance, rate their teaching knowledge and skills very highly indeed, in some cases higher even than international norms (Arends, 2013: 25; Arends and Phurutse, 2009: 18; Gravett et al., 2011: S131; Henning and Gravett, 2011: S28; for more details see Deacon, 2015b).

An analogous dissonance has been observed among Grade 4 and 5 learners involved in the Progress in International Reading Literacy Study (PIRLS) 2006 research, the vast majority of whom had generally high reading self-concepts notwithstanding their low levels of reading achievement. This finding, the researchers cautioned, should be regarded with "an element of scepticism" since it may reflect "a level of social desirability" based on an awareness amongst learners that they ought to be, even if they are not, reading (Howie et al., 2008: 35-7, 56).

On an international scale, South African university students from a range of disciplines (not just ITE students) have been found to be much more optimistic about their career preparedness than graduates employed in the same fields and as having inflated expectations of their skills and being overly sanguine about their current learning experiences (Stein and Irvine, 2015: 3).

In similar vein, at a systemic level, the CHE's review of teacher education found that universities' self-evaluations of the quality of their teacher education programmes were almost invariably higher than the CHE's own assessments (CHE, 2010: 140, Figure 7.1), and this tendency for universities to evaluate themselves more highly was apparent almost regardless of whether they were historically advantaged or disadvantaged or universities of technology or merged institutions, although the self-evaluations of historically advantaged institutions came closest to those of the CHE (CHE, 2010: 143 and Figures 7.1-7.10).

While the CHE noted that "[t]he reasons behind the tendency of institutions to rate themselves too highly are not self-evident" (CHE, 2010: 141), it provided a hint of an explanation in its comment that "[i]nstitutions consistently designed their programmes

at too low a level in terms of the knowledge and competences expected from students" (CHE, 2010: 147). ITERP research also found that teacher educators had low expectations of incoming student-teachers' academic quality, both deploring, and yet seemingly powerless to effectively address, students' poor basic education and general unpreparedness for university studies and indeed for teaching, particularly given their low levels of literacy and numeracy (Deacon, 2013; Taylor, 2014).

Low expectations of learners by teachers at school level (Taylor, 2008: 2; Carnoy et al., 2011: 135; NEEDU, 2013: 12) thus appear to be mirrored by low expectations of student-teachers by teacher educators at university level. Such under-expectations may prevent or dissuade student-teachers from seeking to excel; they may also prevent student-teachers from becoming fully aware of the limitations of their own training: given that the learners they encounter during teaching practice (or later as NQTs) are often so poorly prepared and the LoLT barriers often so imposing, even a mediocre command of subject and pedagogical knowledge will be comparatively so much greater than that of their learners that student-teachers may in fact have little difficulty teaching content that is of low cognitive demand and that requires no more than retrieval.

Further research will be needed to substantiate the apparent connection between student and newly qualified teachers' unfounded confidence and low expectations by universities of their knowledge and skills, but it is worth noting in addition that ITERP's (limited) survey data suggests that the highest levels of confidence and feelings of preparedness were often exhibited by those who had studied at formerly disadvantaged universities and by African students in particular. For instance, and bearing in mind that the majority of ITERP respondents were African students studying at formerly disadvantaged institutions located in small town or rural settings, African student-teachers felt substantially more prepared by their ITE programmes and also felt much more confident about teaching effectively upon graduation than white student-teachers (Deacon, 2015a).

With most student-teachers also receiving very little teaching practice exposure to schools which under apartheid were reserved for race groups other than their own, it is here where the historical legacy of segregation seems to weigh particularly heavily on the ITE system; and this lends support to another important conclusion by the CHE, which is that "the role played by institutional context and historical legacy in the difficulties different [teacher education] programmes encounter to achieving acceptable levels of quality must not be minimised" (CHE, 2010: 145; see also Kruss, 2009: 116).

The CHE review found not only that "a large proportion of education students tend to be enrolled in less than satisfactory programmes", but that formerly advantaged universities were more likely to be both enrolling smaller numbers of students and offering higher quality programmes (CHE, 2010: 145). ITERP also found that the more coherent and rigorous ITE programmes were often (but not always) offered by those of the five case study institutions at the more advantaged end of the higher education continuum, i.e., those universities which, in addition to certain historical advantages (including their relative wealth, reputation and leadership), were also located in more

urban environments, offered their programmes largely or entirely through contact mode and enrolled comparatively small numbers of students.

An additional factor impacting upon the quality of a case study university's ITE programmes was the manner in which the institution had emerged from the higher education rationalisation and merger processes of the early 2000s, which is especially pertinent in the light of the CHE's concern that "the transfer of BEd programmes into the university sector, without overhauling and strengthening its support capacity, seem to have led to the replication of the college form and character of the programme in its new setting" (CHE, 2010: 146). While most universities were affected by the rationalisation process, with some metamorphosing into entirely new entities, others remained relatively intact, and one of these was case study University A which, far from merging with another university, was the dominant partner in an incorporation of one of the few large, urban and better quality colleges of education. University A was already an historically advantaged, long-established contact mode urban institution with a Faculty of Education of some renown. On this rather formidable basis, together with the development over time of a critical mass of like-minded, well-qualified teacher educators armed with a clear vision, informed by research, supported by sound practices and located in close proximity to a set of above average quality, mostly urban schools willing and able to support their student-teachers, themselves often from relatively advantaged school and family backgrounds, University A's ITE programmes were, in many respects, a notch above the programmes of most of the other case study universities.

Some of the features and practices of University A's ITE programmes could well be replicated at other institutions, just as all institutions could learn and improve from best practices at each of their peers. University E had a reputation for strongly school-focused practice; University D was the only one not to send most of its students into suburban schools; University C's learnerships were rated highly by those who had completed them; University B had a strong focus on curriculum issues; and most students at University A were supervised by specialists in their subjects. Without a doubt, too, levels of efficiency could be improved across all institutions and within every ITE programme, at little financial cost; and all could develop, where they do not already have, the capacity to provide formative feedback to students, opportunities for microteaching and lecturer modelling of good classroom teaching practices.

But there are certain aspects of every institution or its ITE programmes which are not easy to replicate, let alone share, such as the quality and even the quantity of its staff, with all universities experiencing difficulties attracting and retaining experienced and qualified academics. Institutions' unique contexts and historical legacies in particular will not be rapidly transformed, and substantial outlays would be needed to ensure even rough equivalencies between ITE programmes in terms of the number of teacher educators and mentor teachers available, along with the requisite logistics and the management thereof, especially if the subject expertise of such supervisors also needs (as it ought) to more or less match the specialisations of the students they are supervising.

And if it takes time to develop a vision of teacher education to which all subscribe, even in a single Faculty, it will take much longer to do so across an ITE system which, like too many of its component programmes, is uneven and fragmented and lacks sufficient coordination, let alone standardisation. South Africa's 'normal schools' are themselves not normalised and as such are unable to exert a sufficiently normalising effect on the basic education system on which they depend. This in turn is due, in large part, to the lack of a self-regulating teacher education (and teaching) profession able to clearly delineate a common, agreed set of ITE knowledge and practice standards and curricula to which all universities should conform.

It was a founding ITERP assumption that ITE cannot be improved by policy fiat, but only by teacher educators examining their own practice; and there is nothing in ITERP's findings that casts doubt on that assumption. While policies and regulations are indispensable, these provide at most a general framework which neither specifies content nor guarantees quality. What new teachers need to learn, how much thereof and how and the quality of all these processes is best determined by the profession itself. An important question, therefore, is whether the profession – to the extent that it exists – feels the need and has the will and the capacity to regulate itself and, by so doing, to intervene in the cycle of mediocrity, where school leavers who were themselves poorly taught are returned to the schools as poorly prepared teachers.

The school leavers with whom teacher educators must work are often of below-average academic quality, with weak subject content knowledge, a lack of proficiency in English and generally poor reading and writing skills. Any attempt to overcome their poor basic education and improve their success and throughput rates must also deal with the fact that they are often first time entrants to universities, from impoverished home backgrounds and being taught in what is usually their second or third language. Their completion rates are slow and dropout rates high: a national cohort study of 5 847 students who enrolled for a BEd degree (including both contact and distance programmes) for the first time in 2005 found that only 41.6% had completed after four years of study and only 60.3% after seven years of study (the latter figure including 65.1% of white students, 57.4% of African students and 52.7% of the male students), with 16.1% having dropped out at the end of the first year and 31.1% after seven years (the latter figure including 27.7% of white students, 32.9% of African students and 37.9% of the male students) (DHET, 2015b).[3]

These dropout rates may be of concern for an entirely different reason, when compared to both national dropout rates and performance and dropout rates for other disciplines. First, an earlier, separate study found that, nationally, across the higher education sector, 30% of the 120 000 students who enrolled for a three-year Bachelors degree in 2000 dropped out in their first year of study, with only 11% graduating at the end of the three years (Letseka and Maile, 2008: 5). Another study concluded that "students enrolled in Education have a higher probability of graduating than those enrolled in the

[3] Note that these figures include students in both contact and distance programmes, and that students in distance programmes (such as UNISA) may be studying part-time and generally take longer to graduate.

SET [science, engineering and technology] field", perhaps due to the latter's higher admission requirements (Bhorat et al., 2009: 117). Third, a recent CHE analysis of the 2006 first-time-entering cohort found that "performance in SET programmes in all three qualification types [i.e. 3- and 4-year degrees and 3-year diplomas] is well below the average and markedly below that in the Humanities and Education areas", and when one includes figures for UNISA, the country's largest provider of teachers, performance is even lower across the board (CHE, 2013: 47). If the BEd dropout rate is in fact among the lowest of all higher education dropout rates, then it suggests that the programmes which are taking in the academically-poorest first time students are also passing these students the most (or failing them the least) and sending comparatively more of these poor quality eventual graduates into the system.

This system-wide problem is a further indication that it will not be enough, even if it were entirely possible, to apply the practices of any particular institution, advantaged or otherwise, or any ITE programme, no matter how good its quality, across the board, without a complete rethinking of ITE by the teacher education profession itself. It is not just because best practices are sometimes specific to institutional contexts and histories and even idiosyncratic to individuals teaching within programmes and institutions, but because the comparatively tiny number of the ostensibly above-average quality new teachers being prepared by the few good ITE programmes are unlikely to make any discernible impact on a schooling system whose dubious distinction is to provide near-universal access to very poor quality education.

ITERP findings show that there is room for improvement at every step in the process of initial teacher education: from the manner in which prospective teachers are selected or admitted into an ITE programme (and even before that, in terms of career guidance while at school) and the extent of the subject and pedagogical knowledge they bring with them and/or are expected to acquire, through the way in which they are placed, mentored, supervised and assessed on teaching practice, to how they obtain employment and are inducted, mentored, utilised and supported by schools and education officials, as well as with regard to bursary funding and certification issues, throughput and dropout rates while at university and attrition and retention once employed as teachers. In fact, ITERP findings suggest that if some of the basics were done (even if they were not done well and even without the sharing of best practices) – for instance, if every student-teacher's actual classroom practices were formally observed, supported through feedback and reflection and assessed both formatively and summatively by both a university supervisor and a teacher mentor, as mandated by government policy – a measurable improvement in the system is likely.

But if one begins at the beginning, then the first place where ITE can begin to improve learning in our schools is to focus specifically on what can be done to improve the quality of ITE applicants and entrants and hence on the process of selection. Starting with the process of selection has the added benefit of positioning ITE to consider how to effectively address incoming student-teachers' low levels of academic achievement at school, and this in turn can prompt debate about how universities and teacher educators can begin to raise their expectations of new teachers and, concomitantly, how newly

qualified teachers should best be alerted and equipped to deal with what ITERP symposium participants described as learners' extraordinary unreadiness to learn (especially but not only where English is the LoLT) in order that these new teachers can themselves begin to raise their expectations of learners.

Selection processes might include measures like raising the number of points required for admission into ITE programmes or increasing the minimum matriculation pass marks needed to specialise in particular teaching subjects; but these are likely to only reduce the total number of applicants to be screened without necessarily improving their overall potential quality. And since the quality of the basic education that most applicants bring with them to university is unlikely to change dramatically in the foreseeable future, it seems more logical to focus at least as much on what motivates people to apply to study teaching as on working more efficiently and effectively with the knowledge and skills these applicants bring to the table.

To what extent, it could be asked, is the teaching profession urgently in need of applicants (roughly one out of every ten ITERP respondents) who only enrol in an ITE programme because they do not really know what other job to do? Similarly, universities could be much more circumspect about accepting those – around a quarter of ITERP respondents – who do not rank a teaching qualification as their first choice of study and simultaneously be more exacting about why they have nevertheless chosen to study to be teachers (since over 80% of ITERP respondents not only saw their ITE studies as an opportunity to study further, but were resolutely intent on seizing this opportunity, long before they had encountered the pressures and expectations of the real world of teaching). From a teacher supply perspective, there seems to be no good reason for a newly qualified teacher to study further within the immediate future: new teachers need to be honing their skills teaching in school classrooms, not continuing to be taught in university lecture theatres. Applicants with aspirations to study further should be expected to demonstrate superior ability, achievement and motivation with direct reference to quality classroom teaching. Consideration might even be given to making further study on the part of newly qualified teachers conditional on having spent a certain number of years teaching.

Although the demand for university places currently outstrips supply, this need not mean that selection processes have to be negatively-inclined, aimed only at turning people away. One also needs to ensure that as many right-minded people as possible are selected, particularly those who have always wanted to be teachers as well as those who really like (and even more especially if they can demonstrate an ability to understand or relate to) children. Moreover, to the extent to which teachers require a particular combination of personality traits over and above being knowledgeable about what they do, to which many ITERP findings allude, this too ought to be considered during the selection process. The mere possession of a teaching bursary, too, should not in itself guarantee selection: over 20% of ITERP respondents were studying to be teachers at least in part because they had teaching bursaries, but if they had been offered a non-teaching bursary as well, would they still have chosen teaching?

Selection is just one link in the chain of initial teacher education that needs improvement. It cannot be considered in isolation from all the other links, and arguably it is not even the most important; but it does have an impact throughout the system.[4] For instance, one of ITERP's key findings – although further research needs to be undertaken into the extent and significance thereof – is that probably the greatest challenge facing new teachers of almost any subject (apart from, but possibly including, any official language other than English) is their learners' limited proficiency in English; and their second greatest challenge may be their own language limitations. Not only is English not the primary language of most NQTs, but a significant minority received very little exposure, formally or informally, to the language during their teacher education studies, the language modules of which were also of very inconsistent quality; and partly as a result, most also felt a need for more training in using English as medium of instruction. Efforts to remedy these challenges – such as by including more language study in all ITE curricula, assuming space can be found for this in curricula already bursting at the seams – would be strengthened and achieve quicker results if ITE applicants were selected in part on the basis of a literacy test.

Nevertheless, the vast majority of selected applicants will still need to be given much more extensive academic support and development than they are currently afforded and perhaps even an extended curriculum, which in turn raises the possibility of additional selection processes further down the road. An English language proficiency test or even a general licensing examination, prior to graduation and intended to ensure that all new teachers meet certain subject, pedagogical and other requirements over and above their university qualifications, could help to both prevent poor quality graduates entering the schools and encourage universities to provide all those they accept into their programmes with better quality preparation. But all such regulation, albeit necessary, can only go so far; real change in ITE must come from within, and it is in large part up to teacher educators, amidst challenging conditions, to collectively decide how to address the biggest challenge of all, which is how new teachers can be empowered to break the cycle of mediocrity and improve learning in our schools.

[4] "[A] bad selection decision can result in up to 40 years of poor teaching", especially in contexts where performance management processes are weak (Mourshed and Barber, 2007: 17).

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References

Arends, F. (2013). The Good Teacher: What teachers need to teach well. *HSRC Review*, 11(2): 23-25.

Arends, F. & Phurutse, M. (2009). *Beginner Teachers in South Africa: School Readiness, Knowledge and Skills*. Cape Town: HSRC Press.

Bhorat, H., Mayet, N. & Visser, M. (2009). Student graduation, labour market destinations and employment earnings, in Letseka, M., Cosser, M., Breier, M. and Visser, M. (eds) *Student Retention and Graduate Destination*. Cape Town: HSRC Press.

Bowie, L. (2014). *Report on Mathematics Courses for Intermediate Phase Student Teachers at Five Universities*. Johannesburg: JET Education Services.

Bowie, L. & Reed, Y. (2016). How much of what? An analysis of the espoused and enacted mathematics and English curricula for intermediate phase student teachers at five South African universities, *Perspectives in Education*, 34(1): 102-119.

Carnoy, M., Chisholm, L., Addy, N., Arends, F., Baloyi, H., Irving, M., Raab, E. et al. (2011). *The Process of Learning in South Africa: The quality of mathematics teaching in North West Province. Technical Report*. June. Pretoria: Human Sciences Research Council.

CHE. (2010). *Report on the National Review of Academic and Professional Programmes in Education*. Higher Education Monitor 11. Pretoria: Council on Higher Education.

CHE 2013 *A Proposal for Undergraduate Curriculum Reform in South Africa: The case for a flexible curriculum structure*. Report of the Task Team on Undergraduate Curriculum Structure. August. Pretoria: Council on Higher Education.

DBE/DHET. (2011). *Integrated Strategic Planning Framework for Teacher Education and Development in South Africa, 2011-2025: Technical Report*. Pretoria: Departments of Basic Education and Higher Education and Training.

DBE. (2013a). *National Implementation of Post Provisioning: National Report*. Pretoria: Department of Basic Education.

DBE. (2013b). *Investigation into the Implementation of Maths, Science and Technology*. Report of the Ministerial Task Team for Mathematics, Science and Technology. October. Pretoria: Department of Basic Education.

Deacon, R. (2012). *The Initial Professional Development of Teachers: A Literature Review*. Johannesburg: JET Education Services.

Deacon, R. (2013). *Initial Teacher Education Project: Institutional Case Studies Composite Report*. Johannesburg: JET Education Services.

Deacon, R. (2015a). *Report on the 2013 Survey of Final Year Initial Teacher Education Students*. February. Johannesburg: JET Education Services.

Deacon, R. (2015b). *Newly Qualified Teachers in South Africa: Report on the 2014 telephonic follow-up survey of the 2013 class of final year initial teacher education students*. October. Johannesburg: JET Education Services.

Deacon, R. (2016). *Newly Qualified Intermediate Phase Teachers in South Africa: Final Report on the ITERP NQT Symposium, July 2015*. July. Johannesburg: JET Education Services.

DHET. (2011). *Policy on the Minimum Requirements for Teacher Education Qualifications*. Pretoria: Department of Higher Education and Training.

DHET. (2013). *Trends in Teacher Education 2012.* Pretoria: Department of Higher Education and Training.

DHET. 2015a *Revised Policy on the Minimum Requirements for Teacher Education Qualifications*. Pretoria: Department of Higher Education and Training.

DHET. (2015b) National Cohort Study on the Bachelor of Education Degree (summary). Personal communication, Whitty Green, Pretoria, Department of Higher Education and Training.

DHET. (2016) *Teaching and Learning Development Capacity Improvement Project: Primary Teacher Education (PrimTEd) Project*. Pretoria: Department of Higher Education and Training.

Gravett, S., Henning, E. & Eiselen, R. (2011). New teachers look back on their university education: Prepared for teaching, but not for life in the classroom. *Education as Change*, 15: S123-S142.

Henning, E. & Gravett, S. (2011). Pedagogical craft and its science: Janus-faced in pre-service teacher education. *Education as Change*, 15(sup1): S21-S33.

Howie, S., Venter, E., Van Staden, S., Zimmerman, L., Long, C., Du Toit, C., Scherman, V. & Archer, E. (2008). *PIRLS 2006 Summary Report: South African Children's Reading Literacy Achievement*. Pretoria: Centre for Evaluation and Assessment, University of Pretoria.

Kruss, G. (2009). From bureaucratic compliance to creating new knowledge: Comparative patterns of curriculum change, in Kruss, G. (ed) *Opportunities and Challenges for Teacher Education Curriculum in South Africa*. Cape Town: HSRC Press.

Letseka, M. & Maile, S. (2008). *High university drop-out rates: A threat to South Africa's future*. Pretoria: HSRC.

Mourshed, M. & Barber, M. (2007). *How the World's Best-Performing School Systems Come Out on Top*. New York: McKinsey and Company.

NEEDU. (2013). *National Report 2012: Summary*. April. Pretoria: National Education Evaluation and Development Unit.

Reed, Y. (2014). *Report on English courses for Intermediate Phase student teachers at five universities*. Johannesburg: JET Education Services.

Rusznyak, L. & Bertram, C. (2014). *An Analysis of Teaching Practice Assessment Instruments: A cross-institutional case study of five universities in South Africa*. Johannesburg: JET Education Services.

Rusznyak, L. & Bertram, C. (2015). Knowledge and judgement for assessing student teaching: a cross-institutional analysis of teaching practicum assessment instruments, *Journal of Education*, 60: 31-61.

Sahlberg, P. (2012). The most wanted: Teachers and teacher education in Finland, in Darling-Hammond, L. and Lieberman, A. (eds) *Teacher Education Around the World: Changing policies and practice*. New York: Routledge.

Stein, J. & Irvine, A. (2015). *Career Preparedness and Lifelong Learning: A Global Perspective*. Salt Lake City: Instructure. URL: http://www.canvaslms.com/downloads/Global_Lifelong_Learning.pdf; accessed 20 October 2015.

Taylor, N. (2008). What's wrong with South African Schools? Paper presented to the Conference on What's Working in School Development, Johannesburg, JET Education Services, 28-29 February.

Taylor, N. (2014). *An Examination of Aspects of the BEd Curricula for Intermediate Phase Teachers at Five Higher Education Institutions*. Johannesburg: JET Education Services.

Taylor, N. & Robinson, N. (2016). *Towards Teacher Professional Knowledge and Practice Standards in South Africa*. Johannesburg: Centre for Development and Enterprise.