

To: The Chairperson, Fees Commission
From: Emeritus Professor Ian Scott (ian.scott@uct.ac.za)
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Response to testimony of the Department of Higher Education and Training on 24 March 2017

1. INTRODUCTORY NOTES

I appreciate the opportunity to respond to that part of the DHET's testimony of 24 March 2017 that relates to presentations I made to the Fees Commission on 18 October and 9 November 2016.

I believe there is much common ground between the DHET's position on improving teaching and learning in higher education and my position as an academic in the field of Higher Education Development. In particular, the Department's current commitment to focusing on student success and 'equity of outcomes' reflects a central and longstanding goal of the Academic Development movement that I have worked in. The common goal is expressed as follows in the DHET's recent White Paper on post-school education and training:

As participation increases, universities must simultaneously focus their attention on improving student performance. Improving student access, success and throughput rates is a very serious challenge for the university sector and must become a priority focus for national policy and for the institutions themselves... Despite the overall demographic changes in the student bodies of universities [since 1994], cohort studies have shown that black students, particularly those from poor backgrounds, are still most affected by poor graduation and throughput rates. The relationship between equity of access and equity of outcomes must therefore continue to be a substantive area of focus. (DHET 2013)

However, I am not in agreement with the DHET on the adequacy of the existing and planned interventions for bringing about the necessary performance improvement and equity. The disagreement centres on the key structural matter of the undergraduate curriculum framework, which impacts on the effectiveness of teaching and learning in a range of fundamental ways.

According to my reading of the testimony, the DHET is responding critically to the support I expressed to the Commission, in my 2016 presentations, for the Council on Higher Education's proposal for a 'Flexible Curriculum' structure for undergraduate education in South Africa¹. As the Commission may recall, my advocacy of this proposal was expressed in the context of arguing for the centrality of 'extended provision'² – in a generic sense, including the form in which it is currently

¹ The proposal (CHE 2013), produced by a CHE task team of senior academics, was published for public comment in August 2013 and thereafter adopted by the CHE itself in 2014. It was the subject of formal advice to the Minister of Higher Education and Training submitted by the CHE in December 2014.

² The minimum requirements for an effective alternative curriculum framework are: to allow additional time for the developmental provision that many students need in order to overcome the systemic obstacles they encounter as a result of educational inequalities; and to establish entry levels that allow for curriculum assumptions that accord with the realities of these students' backgrounds. The generic term for programmes that meet these requirements is 'extended provision'.

provided, i.e. the ‘extended curriculum programme’ model – for improving student success and equity. Since the question of my awareness of current DHET interventions was raised during the DHET testimony, I confirm that, as stated in my first presentation, I have worked with the DHET for some fifteen years on extended curriculum programmes; thus my argument in favour of the Flexible Curriculum was, and continues to be, made with sound knowledge of this and the other major teaching-and-learning interventions put in place by the DHET.

Parts of the transcript of the testimony are not clear to me, so I speak under correction if I have misinterpreted any of it. However, as I understand the testimony, the DHET is stating that, while it may accept some of the principles and goals underlying the Flexible Curriculum concept, the proposal itself was justifiably rejected, principally on the grounds that:

- a) the data informing the proposal were inadequate or are no longer applicable, and
- b) the DHET’s existing and planned teaching-and-learning interventions are sufficient, at the system level, to bring about the improvements in ‘access, success and throughput rates’ that are needed.

This position mirrors the reasons for not accepting the CHE’s advice given by the Minister in his brief letter to the CHE dated 5 June 2015, which to the best of my knowledge is the only formal response to the CHE proposal that has been issued. The letter states:

These grants [for system-wide teaching-and-learning interventions] are now firmly embedded in the system, having matured into effective instruments for developing capacity and bringing about change and improvements in performance. I believe that the Flexible/Extended Curriculum proposal, based on 2005 cohort data, has underestimated the improvements brought about by these and other interventions, and thus has perhaps underestimated the possibilities of curriculum reform within the current structural dispensation.

Having studied the transcript of the DHET’s testimony and reviewed the recently-released performance statistics referred to in the testimony (DHET 2017a and 2017b), I have not found reason to change my position on the need for structural curriculum reform that goes beyond the existing interventions, and I continue to believe that reform along the lines of the Flexible Curriculum proposal is a valid, viable and necessary approach. The full case for the Flexible Curriculum is set out in the 2013 Flexible Curriculum proposal (CHE 2013) and cannot be summarised here. However, since the matter of the DHET’s basis for rejecting this approach has arisen again through the DHET’s response to my presentations to the Commission, I would like to challenge the two broad reasons given, as I have interpreted them in (a) and (b) above.

I believe that the DHET supports the concept and practice of evidence-based policy development. A key issue in the current matter is what constitutes valid and sufficient evidence for policy on teaching-and-learning interventions, and I address this in my argument.

Structure of response

This response is made in my personal professional capacity. However, since the Task Team’s report was supported by the CHE, argument drawn from the content of the Flexible Curriculum proposal may be expected to reflect the position of the CHE as well as the Task Team.

The response is structured as follows:

- c) *Sections 2 and 3* offer contextual background that I believe is necessary for my argument, particularly the non-quantitative analysis, concerning the adequacy of current teaching-and-learning interventions and what may be required in addition.
- d) *Section 4* offers a detailed analysis of data in relation to the DHET's grounds for rejecting the Flexible Curriculum proposal. Its four main subsections deal with: the validity of the data informing the Flexible Curriculum proposal; critique of the suitability of the current forms of data published by the DHET as a basis for decisions on interventions; an assessment of the current state of the higher education system; and an assessment of improvement trends as evidence for decisions on interventions.
- e) *Section 5* is the first part of a qualitative analysis of the adequacy of current system-level interventions; it focuses on analysing whether adequate interventions are in place in each of the main areas of the teaching-and-learning process where developmental work is essential.
- f) *Section 6*, the second part of the qualitative analysis, focuses on the suitability of two main models of structural curriculum intervention: the current extended curriculum programme model and the proposed Flexible Curriculum model.
- g) *Section 7* provides overall conclusions and recommendations.

2. CONTEXT: WHAT TEACHING-AND-LEARNING INTERVENTIONS NEED TO ACHIEVE

Among the various requirements of effective teaching-and-learning interventions in South Africa, the following have particular relevance for policy and for the selection and design of new initiatives.

Firstly, as reflected in the extract from the DHET White Paper quoted above, the twin imperatives of *substantially improving overall performance in higher education and achieving equity* – equity of outcomes as well as of access – are a priority for the higher education sector, arguably the top priority for its educational function (as distinct from research and service). They are ‘twin’ imperatives in that, to meet South Africa’s needs, one cannot be accomplished without the other (CHE 2013: 32).

In essence, meeting these challenges means substantially improving graduate output and outcomes in terms of numbers, quality, equity, mix of fields, and attributes that take account of the contemporary world, local and global. The goal must be successful completion of studies, without which access has little or no value. The appropriateness of higher education policy and interventions in the area of teaching and learning should thus be judged in terms of their effectiveness for achieving this overarching goal.

Secondly, a key characteristic of the undergraduate student body in South African higher education is *diversity in educational background*. This diversity is not of the enriching kind but is rooted in inequalities, particularly in relation to schooling and proficiency in academic uses of the language of instruction. It applies to the student intake into the higher education sector as a whole and also in a number of individual universities. It is manifested in access, success and completion patterns across the system, and thus has major implications for the design and delivery of the teaching-and-learning process. The limitations of ‘one-size-fits-all’ approaches, as referred to in the DHET testimony in relation to student support, apply to a number of aspects of a highly diverse higher education system such as South Africa’s.

There is little dispute about the existence of such diversity in the student body, but the same cannot be said of its implications for the teaching-and-learning process in practice, particularly in relation to its scale. The latter is critical because any significant mismatch between the scale of an intervention and the proportion of the student intake that needs to benefit from it will leave numbers of students under-served, and will diminish its effectiveness.

Thus the appropriateness of the design and intended reach of an intervention should be judged in terms of its capacity to cater successfully for diverse educational backgrounds on the necessary scale.

3. CONTEXT: CATEGORISING KEY ELEMENTS OF THE TEACHING-AND-LEARNING PROCESS IN WHICH IMPROVEMENT AND SUPPORT ARE NEEDED

Interventions for improving student success commonly focus on one or other of the main elements of the teaching and learning process, but it is clearly important that they are recognised as being complementary, and are designed and co-ordinated accordingly. They nevertheless need to be categorised, to ensure that their roles are clearly understood and well developed. I briefly describe the main areas of intervention here because they are important for my analysis of the DHET position. Please note that the crucial and currently contested area of institutional and student funding is not within the scope of this response even though its influence on teaching and learning is fully recognised.

Major areas of the teaching-and-learning process which critically affect student learning and completion of qualifications, and which are within the control of the higher education sector, can be grouped under three broad headings, as follows.

Curriculum content and orientation

In many higher education institutions and disciplines, curriculum content enjoys developmental attention from academic staff more regularly than the other elements of the teaching-and-learning process do, in that it is recognised as essential for courses to be kept up to date with advances and new approaches in the discipline. Changes in the orientation of a curriculum – for example, the shift to a primary health care orientation in many health sciences curricula internationally over the last decade or two – are more fundamental and less frequent. While such changes may often go largely unnoticed outside of the faculty, the choices and treatment of both content and orientation can impact on student learning, and on which students thrive and which are alienated. This feature of higher education came to the fore abruptly in the 2015-16 ‘Fallist’ protests with demands for the ‘decolonisation’ of curricula.

The relationship between student learning and curriculum content or orientation gives this facet of higher education a legitimate and probably increasingly important place on the educational development agenda, as is mentioned in the DHET testimony. However, it is not at present significant within the issues addressed in this response, so does not need to be discussed in any detail.

Delivery of the curriculum

By ‘curriculum delivery’ I mean all the ways in which a given curriculum is communicated and made accessible to the students. In higher education it is a complex process, encompassing:

Teaching, learning support, advice and guidance, coaching, mentorship, peer and collaborative learning, feedback and assessment, personal development planning and tutoring, skills development and practice, and access to resources... (JISC undated)

For convenience of discussion, I would add psychosocial support, which broadly facilitates student learning, and academic staff development – enhancing the capacity of academic staff as educators – which aims to improve student learning through expert and responsive teaching.

While delivery is in no way independent of other aspects of curriculum, most if not all of its elements need to be effectively implemented irrespective of the content, orientation and design of a curriculum. The understanding that sound delivery is fundamental to higher education is manifested in the fact that the university block grant subsidy was designed to cover reasonable expenditure on the core elements of delivery, aiming to ensure that they would always be in place as essential services.

Of particular relevance here is ‘concurrent’ student support, referring to all the forms of learning support available to students while they are engaged in particular courses in the curriculum – most commonly in the form of group activities (like tutorials and peer-learning), individual consultations with teaching staff or mentors, or technology-mediated learning. Concurrent support can be beneficial for all students in a range of ways, from learning-to-learn to deepening advanced knowledge, and has also been used in Academic Development initiatives aimed at addressing forms of student underpreparedness.

In itself, however, sound delivery is complementary to, but cannot be a substitute for, appropriate content and orientation or effective curriculum design (see below). As JISC puts it in relation to the latter:

Curriculum delivery is part of [a] dynamic interrelationship with curriculum design... Within this process 'delivery' is defined as the point at which learners interact with the designed curriculum. (JISC undated)

The relationship between delivery and design is critical to evaluating structural interventions such as extended curriculum programmes and the Flexible Curriculum proposal. In particular, concurrent support has been found to have distinct limitations in capacity to successfully address significant mismatches between student preparedness and conventional university expectations. I am concerned that the DHET’s current package of interventions may be conflating the different affordances of design and concurrent support, as discussed in section 5.3 below.

Design: the curriculum framework

The structure and design of a curriculum (like its content and orientation) can have a major impact on student learning and on which students succeed and fail (CHE 2013: 35). In the South African context, there is particular significance in the ‘curriculum framework’, by which I mean the key parameters that frame the curriculum design as a whole: the entry and exit levels, the formal duration (which influences the entry and/or exit level), and the degree of rigidity or modularity (which affects *inter alia* sequencing and pacing in the curriculum). In most higher education systems, these parameters are so embedded that they are taken for granted as an immutable – even universal – norm. This is not the case, however, as they in fact vary considerably from country to country; for example, there is a two-year difference between the undergraduate entry levels of Botswana and Zimbabwe.

Exit levels and standards must clearly be stable and internationally comparable. However, other key parameters – particularly entry levels and modularity – can and should be adjusted to meet the country's needs and conditions, for example to cater for greater inclusiveness, changes in the student profile or the quality of the school system. Given the powerful influence of the curriculum framework on what categories of student can be responsibly admitted, and what categories will have an acceptable probability of succeeding, it is in fact essential for such adjustments to be made.

In South Africa, given the unavoidable diversity of educational background in the student body, it is not possible for a single set of curriculum parameters to provide the full range of the intake with any fair degree of equality of opportunity to succeed. As student performance figures from various sources show time after time, the status quo still heavily favours the 'traditional' student, while the probability of succeeding remains persistently low for students who (amongst other characteristics) do not have the medium of instruction as their mother tongue and whose school was not in the top quintile. The fact that students from this kind of background have constituted a large proportion of the enrolment growth in South African higher education, and that this proportion will rise with further growth, suggests that serious consideration should be given to more fundamental systemic change than has hitherto been made.

It would be surprising if the need for change did not apply to the curriculum framework, among other things, since this has such a fundamental influence in shaping the teaching-and-learning process. It is critical that the framework should enable improvement in accommodating diversity, not constrain it. The framework advocated in the Flexible Curriculum proposal is designed to deal directly, as its central rationale, with the issues arising from diversity and educational inequalities.

The DHET (as well as its predecessor, the Department of Education) has recognised the need for an alternative to the traditional curriculum framework for a long time, and has acted decisively on this by introducing and expanding the use of Extended Curriculum Programmes nationally, over more than a decade thus far. The extended programme model is designed to meet some of the key framework requirements noted earlier, principally a lower entry level (based on expectations that are realistic for talented students from disadvantaged schools) and an additional year of formal duration (to give these students the additional provision and time needed to achieve the regular standards and learning outcomes prescribed).

In my view, the DHET's strong support for the concept of extended provision, along with its commitment to administering, funding and expanding the current form of this, viz. extended curriculum programmes, is indicative of its concern for equity and warrants strong appreciation.

As I see it, then, my disagreement with the DHET is about form and scale, about the adequacy of the extended programme model for current and future conditions, rather than about the underlying goals. The main limitation of the present model is that it was designed for a minority of the student intake, and this places constraints on its educational effectiveness, the way it is perceived by students and within the universities, and its capacity for expansion. This issue is analysed in section 6.2.

First, however, it is necessary to analyse relevant student performance data, particularly the DHET's recent cohort studies, to evaluate them as evidence for policy decisions. This is critical as quantitative data of this kind have had a key role in informing the Flexible Curriculum proposal, the CHE's advice to the Minister on this, and the DHET's position on the adequacy of its current systemic interventions. The latter has far-reaching implications nationally.

4. EVALUATING STUDENT PERFORMANCE DATA AS EVIDENCE FOR POLICY AND INTERVENTIONS

As noted earlier, I understand from the Minister's letter and the transcript that the DHET's position is that its existing and planned interventions are sufficient, at the system level, to bring about the improvement in student success that is needed; a major systemic intervention such as the Flexible Curriculum is therefore not justified.

According to my analysis of the transcript, the DHET uses two main arguments to support this position:

- h) It relies on a range of quantitative student performance data to argue that there is a satisfactory trend of improvement, attributable to the interventions that are in place, that indicates that the proposed Flexible Curriculum (as well as, presumably, other systemic interventions) is not warranted. This argument includes a critique of the adequacy of the data that informed the Flexible Curriculum proposal.
- i) It describes the kinds of interventions regarded as necessary for improving student success, and outlines the purposes of its existing and planned interventions to demonstrate that they match the needs.

This section addresses the first argument. The second is addressed in sections 5 and 6.

4.1 DHET critique of the quantitative data informing the Flexible Curriculum proposal

The DHET criticises the quantitative data that informed the Flexible Curriculum proposal on two grounds: (a) that the data came from only one student intake cohort, the implication being that the data did not provide sound or sufficiently in-depth evidence to support the proposal; and (b) that the data are now 'dated' and thus not valid as evidence.

Scope of the data

The Minister's letter states that the Flexible Curriculum proposal was 'based on 2005 cohort data'. According to the transcript, the DHET stated the following in relation to my presentations (and hence the Flexible Curriculum proposal):

... the presentation does provide a static picture of a dynamic evolving system. For example, to focus [on] one cohort of students as a picture of the system does not paint that cohort in a historical trajectory that shows development. (Fees Commission 2017: 15)

These statements do not accurately reflect the compass of the data used for the Flexible Curriculum proposal. The section of the proposal document headed 'A note on the data' (CHE 2013: 40), placed at the beginning of the chapter on performance data, states that 'The data analysis is based on the 2005 and 2006 first-time entering cohorts, tracking their performance over a 5-6 year period.'

Moreover, ‘for comparative purposes, the 2006 cohort analysis has also been cross-referenced with the 2000 and 2001 first-time entering cohort study published in the CHE’s Higher Education Monitor 6 (Scott, Yeld and Hendry 2007).’

The data tables in the Flexible Curriculum proposal primarily made use of figures from the 2006 cohort, in the interests of clarity. This was fully warranted because:

- the 2006 cohort was then the latest for which sufficient longitudinal data were available;
- the cohort analyses had shown that the prevailing patterns of performance were ‘robust’, particularly at the level of the ‘qualification type’ (i.e. 3-year degrees, 3-year diplomas and 4-year degrees), with exceptions noted in the text;
- the 2006 cohort data thus represented the key performance patterns fairly; in fact, though this was not stated in the document, the 2006 cohort’s performance was marginally better than the 2005 cohort’s, so could not be regarded as presenting an unduly pessimistic picture;
- the approach to the presentation of the data was explicit and transparent in the document;
- detailed notes on comparisons between the four cohorts studied were included in several of the commentaries on particular tables in Chapter 3 (where the cohort analyses were principally discussed) and notable changes in patterns were outlined on p 51, acknowledging cases of improvement.

Contrary to the perception that may have resulted from the DHET’s criticism, the quantitative data used in researching the Flexible Curriculum proposal were extensive. The 2005 and 2006 cohort studies were produced from HEMIS data by Dr Charles Sheppard, who has wide-ranging experience of national studies, and ran to some 120 pages of tables, disaggregated by population group and down to the level of qualifications (e.g. BSc, BAgric).

This volume of data allowed some key comparisons to be made across cohorts, qualifications and qualification types, and by population group. The conclusions drawn were based on persistent performance patterns that could be discerned.³

It is a concern that, in analysing the Flexible Curriculum proposal, the DHET evidently interpreted the conclusions arising from the data as if they were based on only one cohort, rather than being informed by the performance of four cohorts. It raises the question of whether the data might have carried more weight if the full compass of the work had been understood.

Data no longer valid?

The Minister’s letter indicated his view that improvements which had occurred since the time the Flexible Curriculum proposal was researched showed that the proposal had ‘underestimated the improvements brought about by [the DHET’s] interventions’ and that these improvements made

³ Patterns of this kind lie in comparative stability in absolute performance (e.g. overall completion rates remaining in a band of, say, 5 percentage points) and in relative performance across groups or qualifications (e.g. consistently higher completion rates in professional degrees as compared with 3-year degrees). The performance patterns can therefore hold despite relatively small fluctuations in the detailed year-to-year data.

consideration of the Flexible Curriculum unnecessary. Similarly, the DHET testimony was that the data in the proposal were ‘dated’ and that ‘Our analysis has shown that the system is evolving and improving and that the range of initiatives that has been implemented in the system do seem to be making impacts’ (Fees Commission 2017: 12 and 14). This line of argument has been used in other DHET documents and presentations, including material prepared for the 2015 Higher Education Summit (DHET 2015).

Since quantitative data on performance patterns make up a key element of the motivation for introducing a Flexible Curriculum, subsequent substantial improvements in the patterns and outcomes of the system would clearly diminish the case. On the other hand, if the key broad patterns and outcomes have persisted, the conclusions that prompted the Flexible Curriculum proposal would remain valid.

The DHET has recently produced its own cohort studies, initially as part of its submission to the 2015 Higher Education Summit, a discussion paper titled ‘*Are we making progress with systemic structural transformation of resourcing, access, success, staffing and researching in higher education: What does the data say?*’ (DHET, 2015). It is evidently with reference to this paper and subsequent cohort study updates that the DHET regards the Flexible Curriculum proposal data as no longer valid.

It is in fact not possible to make direct comparisons of the two sets of data because of differences between them in the forms and levels of disaggregation used. The CHE report data focused strongly on the ‘contact’ student body because the issue of curriculum duration – which is at the centre of the Flexible Curriculum proposal – relates predominantly to this group (which makes up the majority of the enrolment). In contrast, all but one of the data tables in the latest DHET cohort studies aggregate contact and distance education students. The contact-student table aggregates all three qualification types, thus allowing no direct comparison with the more detailed CHE data here either.

However, the DHET’s recently-released Ministerial Statement on the forthcoming University Capacity Development Programme (DHET 2017b) contains some contact completion rates for individual qualification types that allow for direct comparison. The comparison that is relevant to the present validity of the performance patterns used in the Flexible Curriculum proposal is between the 2006 cohort used in the CHE report and the 2011 cohort in the DHET data in respect of 3-year degrees and diplomas. The figures here are completion rates within 5 years. (The 2011 cohort is the latest for which sufficient data on 3-year programmes are available.)

Figures are included for longer degree types but these are not directly comparable because the CHE data show completion of 4-year degrees within 5 years, while the DHET data show completion of all 4-6-year degrees within 6 years.

The following table shows the comparisons.

*Table 1: Comparison of contact completion rates of the 2006 cohort (from the CHE Flexible Curriculum proposal) and the 2010 /2011 cohort (from DHET):
by qualification type and population group*

	Diplomas: graduated within 5 years (%)		3-year degrees: graduated within 5 years (%)		Longer degrees	
	2006 cohort: CHE	2011 cohort: DHET	2006 cohort: CHE	2011 cohort: DHET	2006 cohort: CHE: grad 5 years (%)	2010 cohort: DHET: grad 6 years (%)
All students	42	41	53	49	(49)	56
African	39	40	47	44	(44)	50
White	55	49	64	62	(58)	71

Sources: CHE 2013:45,49; DHET 2017b: 26-27

In the case of the 3-year qualifications, the completion rates are mainly very similar, as are the relationships between the groups. In all but one of the comparisons, the DHET figure shows a lower completion rate. This does not support the DHET implication that the Flexible Curriculum data presented an unusually pessimistic picture.

In the case of the longer degrees, the addition of another year of completion data to the CHE figures (to strengthen comparability) would be likely to add another 4-6 percentage points and so bring the rates much closer. Moreover, the DHET rates are strengthened by the inclusion of 6-year medical degree students (MBChB), whose rate of completion in regulation time is very high.

This is only one table but the statistics it presents are fundamental indicators of undergraduate performance.

In summary, I do not see evidence here of the Flexible Curriculum proposal having underplayed improvement in the system that may have occurred after its analyses were done.

I would argue, rather, that the comparable data that are available indicate that the broad performance patterns that underlay the Flexible Curriculum proposal are persisting. The patterns include low overall rates of completion within ‘reasonable time’, substantial discrepancies between qualification types, and racial skewing in outcomes. It is these patterns that must be changed if improvement is to be achieved. The persistence of the key patterns indicates that the conclusions and recommendations in the Flexible Curriculum proposal, as well as the CHE’s related advice to the Minister, cannot be said to have been invalidated by outdated or flawed supporting data.

If we return to the DHET’s rationale for the position it has taken, the main cohort studies referred to earlier have presumably underlain the Department’s argument that performance is improving

sufficiently to show that its current interventions are succeeding. As noted earlier, however, I do not accept that the DHET's interpretation of these cohort data constitutes adequate evidence of improvement that would invalidate the Flexible Curriculum proposal. In view of the importance of this matter to future teaching-and-learning policy development, I find it necessary to critique the DHET's interpretation of the current data and improvement trends, and offer an alternative analysis. These matters are set out in the remainder of section 4.

4.2 Critique of the DHET's cohort data as evidence for policy development

The DHET began publishing its higher education cohort studies in 2015, initially for the Higher Education Summit in that year, and then in annual iterations. The most recent set was released in March 2017, and is referred to in the DHET's testimony as providing evidence of system improvement. It is this document that I use here as the basis for my critique, which focuses principally on the forms of data currently produced by the DHET.

There has been some evolution in the form of the DHET data since 2015 (the year in which the Minister rejected the CHE's advice on the Flexible Curriculum proposal). However, in my view it continues to have major limitations as an instrument for analysing student performance in the detail necessary for identifying patterns that can be used to detect significant obstacles to student progression. This means that it does not provide an adequate basis for designing effective, targeted interventions. On the basis of my research experience, I believe this means that the DHET data, in their present form, do not constitute a satisfactory body of evidence to inform teaching-and-learning policy development. My reasons for holding this view are as follows.

The need for disaggregation of data

The main shortcomings in the utility of the DHET cohort studies, particularly as a basis for developing teaching-and-learning interventions, is the level of detail available in the data. This arises from the limitations in the levels of disaggregation presented.

The very limited disaggregation of the cohort data result in only high-level data being available. High-level data can be unintentionally misleading in that they can mask major differences in performance in relation to, for example, population group, educational or linguistic background, gender, subject area (e.g. Engineering as opposed to Social Science), and type of qualification (e.g. a 3-year diploma as opposed to a 4-year professional degree). This means that the DHET's current cohort data offer few if any possibilities for key developmental actions such as:

- identifying areas and student categories in which there is relatively low performance (and in some cases determining whether disparities in performance exist at all across such variables);
- contributing to the diagnosis of systemic faults (e.g. in the curriculum framework) that affect different categories of students differently (e.g. as a result of educational inequalities);
- testing hypotheses about obstacles to performance, developed from qualitative or analytical research;
- developing interventions that can be directed where they are most needed.

This has implications for the effective use of resources for bringing about necessary systemic improvement.

The levels of disaggregation in the DHET cohort data

Limitations in the disaggregation of the current published cohort data include the following:

- Performance in the *contact and distance modes* are shown separately in only two tables, both being high-level tables aggregating all three qualification types studied (3-year diplomas, 3-year degrees and 4-6-year degrees) and all students (tables 3 and 4). This is a major shortcoming not only because there are large differences in performance between these modes but also because it is believed that there are significant differences in problems and appropriate responses between the two modes. Distance education enrolment makes up over a third of total enrolment in public higher education, so applying interventions that would not be effective there would be very wasteful.
- The tables showing each of the three *qualification types* separately are disaggregated by gender and population group, but these data lack utility because there is no disaggregation by mode.
- The data provided on *specific qualifications* (such as Engineering and Natural Science degrees) are not disaggregated by mode or population group. The tables show the overall performance discrepancies between qualifications, but it is known from other research that there are significant disparities by population group within qualifications. Identifying these, as well as inconsistencies in the equity patterns across qualifications, has considerable developmental significance for using targeted strategies for undoing the legacy of apartheid.
- Important claims are made about the performance of *NSFAS-supported students* on the basis of the DHET data. However, because there is no disaggregation by mode and qualification type, there is no means of telling whether like is being compared with like. For example, if the proportion of contact as opposed to distance students differs significantly between the NSFAS group and the total student body, the comparison would be skewed.

Thus, there is essential quantitative information on key developmental issues that the DHET data in their current form cannot provide. Some examples are:

- What proportion of *contact* as opposed to distance students *graduate in regulation time* (*n* years) in each of the three qualification types, and are there useful patterns to be discerned here? (It would be especially useful to see patterns by population group, as these could point to key common factors such as linguistic and schooling background which can be responsive to interventions.) As curriculum research has shown, differences in the learning demands made by the different qualification types mean that analysis and ‘diagnosis’ at any higher level of aggregation is of very little value. Distinguishing between the modes is necessary for the reasons given above, and particularly for determining an effective curriculum framework.

- The same questions apply to *graduation within n+1 years, n+2 years and so on*. They are equally important for curriculum design but only if disaggregated by mode.
- For similar reasons, educational development requires disaggregated data at the level of specific qualifications, at least by mode and population group. For example: *Do African students perform better in some qualifications than in others?* The differences in learning challenges between qualifications within the same type (e.g. a BSc in natural sciences and an Arts-orientated BA) can be at least equal to those between qualification types, and identifying performance differentials is a key element of understanding these. The following table (drawn up from CHE data) offers a broad idea of the variation within qualification types, even in the absence of disaggregation by population group:

Table 2: Discrepancies in completion rates within 6 years for the 2008 cohort:

3-year diplomas

Law	Engineering	Health	Social Science
32	41	69	74

3-year degrees

Law	Science	Health	Architecture
34	52	62	77

4-year degrees

Law	Engineering	Health	Education
53	52	75	75

(Source: VitalStats 2013)

Disaggregation by population group would generally show greater discrepancies.

- What student categories require or would benefit from curriculum interventions such as the Flexible Curriculum? What proportion of these categories as well as of the total student intake would be affected?

In summary, there are critical limitations on what the current DHET data can tell us about major areas of learning where there are systemic obstacles that affect different student groups differently. Such knowledge is of major importance in accurately directing more fine-grained research into the possible causation and forms of such obstacles, and developing a curriculum framework as well as specific interventions that will be effective and not wasteful of resources.

The DHET acknowledges the need for greater disaggregation and detail in the current cohort studies. This goes back to the 2015 Summit data, where the DHET states, ‘We do need to drill down to more differentiated levels ... and to identify what the success patterns are within disciplinary and subject areas ...’ (DHET 2015: 26). This has partly been done but still without sufficient disaggregation. As stated in the latest cohort studies:

These cohort studies are limited because they do not provide disaggregated data by mode of study (contact and distance) and by population group and gender. Such work is necessary to really identify the blockages to

success and to ascertain effective interventions to work towards improved success and efficiencies in the system. (DHET 2017a: 115).

Therefore, unless the DHET is relying on data it has not published, it is not clear on what basis it can currently make decisions about what interventions to use or reject, or about the adequacy of its current suite for addressing the key problems in the system.

It is noteworthy that the forms of disaggregation in the various recent cohort studies have changed, but they remain unsuitable for determining in-depth interventions and studying possible reform to the curriculum framework. The scale of the roadmap, as it were, is not large enough for accurately planning the way.

These limitations can clearly be attended to in future. My fundamental conclusion here, however, is that the scope and the depth of the DHET data – as published – have not provided, and do not yet provide, an adequate basis for informing critical teaching-and-learning policy decisions on systemic interventions, including reform of the curriculum framework. It follows that viable options should remain on the table until the basis for thoroughly evaluating them is in place.

Caveats regarding the meaning of performance measures in use

Besides cohort data, there are other quantitative measures of performance in use. They are useful for providing knowledge about aspects of the teaching-and-learning system but care needs to be taken to ensure that they are correctly used (in accordance with their definitions and limitations) and as far as possible correctly understood by a non-specialist audience (by, for example, providing definitions or explanations of their significance). If this is not the case, misunderstandings may arise that will distort understanding of actual student performance and hence incorrectly influence the development, application or assessment of initiatives.

A measure that is commonly misunderstood is the '*course success rate*' (The term '*pass rate*' has a similar but not identical meaning.) In essence it refers to a specific course or module, indicating the proportion of the total enrolment in a course who pass that course. However, it is commonly used to calculate a weighted average rate covering a number of courses. These success rates sound high, typically being over 70% or 80%, so when they are mistakenly thought to be the percentage of students completing their studies, the system seems to be doing very well.

This misconception is misleading in two main ways: (a) success rates do not reflect student attrition (so in fact a ready way to improve them is for institutions to exclude at-risk students); and (b) the cumulative effects of course failure rapidly reduce the throughput rate; so, for example, if the passes are randomly distributed, a course success rate of 70% for a given intake, if sustained over all years of a 3-year qualification, would yield a final completion (or throughput) rate of no more than 34%. (The calculation would be 70% of 70% of 70%.) It is therefore not possible to read off trends in the completion rate from the success rate. This needs to be taken into account in evaluating this measure, which is included in the DHET's suite of indicators of student success mentioned in the testimony (Fees Commission 2017: 16).

Other performance measures that need to be well understood include the following:

- The ‘*graduation rate*’ is a measure that has been used by the DHET in a specialised sense for some years. Its technical meaning does not need explanation here, but the key point is that, counter-intuitively, it does not mean the same as the ‘*completion rate*’ – also known in South Africa as the ‘*throughput rate*’ – which denotes the percentage of a given student intake that graduates.
- The meaning of the ‘*dropout rate*’ is straightforward but the caveat here concerns what it tells us about student success, and specifically what its relationship is with the completion or throughput rate. Since dropout rates form an important element of the DHET’s assessment of the state of student performance, it is important that their significance be understood. This key matter is discussed in section 4.4 below.

In summary, among the various measures available it is now widely accepted that the (cohort) completion or throughput rate is the key measure of student success since it provides the most reliable picture of the proportion of students who complete their studies (CHE 2013: 40).

4.3 Interpreting the current performance of the higher education sector: implications for developmental action

The central question being addressed in this section and the next is ‘What evidence is there to indicate whether the existing interventions in the system are sufficient to resolve the prevailing student performance and equity issues, or whether substantial, systemic reforms are needed for this?’

The DHET’s position relies much on arguing that the system is improving acceptably as a result of the interventions it has put in place. Before examining the critical matter of the extent, trends and rate of *improvement* of performance (see section 4.4), it is worthwhile to consider the current position – in the light of the question above – as a basis for future improvement. This discussion focuses principally on the DHET’s latest cohort studies and the conclusions expressed there.

A note on the higher education participation rates

South Africa’s gross enrolment ratio (GER) for higher education has been increasing but from a low base. The 2015 overall rate is 18.6 which is low in comparison with the rates of countries at a similar stage of economic development. Of particular concern is continuing racial inequality, with a three-fold disparity between white and African students (52.8% compared with 15.6%) (DHET 2017b: 23).

The GER has important implications for teaching and learning in the following respects:

- The African and coloured students in higher education constitute a small and select group (only about 12% of the youth in those population groups), so have the potential to do well in higher education.

- Substantial growth in university enrolment will be required to meet targets set by the National Development Plan and the DHET itself. There will also be pressure for growth in the interests of equity.
- Since much of the required growth will come from the historically under-represented groups, where poor schooling predominates, the average level of preparedness for regular university programmes can be expected to decline.

Current cohort performance

This analysis focuses on the most recent *cohort completion (or throughput)* data available in the DHET’s cohort studies. The use of dropout rates in performance analysis is addressed in the next section.

The following tables provide a summary of the latest completion-rate figures for the various parameters listed, for all 3-6-year qualifications and then for the three individual qualification types, as per the DHET’s categories.

Please note:

1. The figures in brackets indicate the cohort intake year from which the relevant rate is taken.
2. n/a means that the figure is not available in the cohort study because of the limited disaggregation discussed earlier.
3. Where figures by population group are available, only those for African and white students are given, in the interests of space. The figures for coloured and Indian students almost always fall between the African and white categories.

Table 3: Latest available completion rates: Percentages: All 3-6-year undergraduate qualifications: All students (contact + distance) and All contact students

Graduated within:	Contact + distance students			Contact students		
	<i>All</i>	<i>African</i>	<i>White</i>	<i>All</i>	<i>African</i>	<i>White</i>
3 years (2013)	17.6	n/a		20.8	n/a	
4 years (2012)	33.8			45.8		
5 years (2011)	44.4			59.0		
6 years (2010)	52.5			63.9		
10 years (2006)	54.4			66.7		

Extracted from DHET 2017a

Note: Year 3 represents the regulation time for the majority of the enrolment (3-year diplomas and degrees), but the figure here includes students in longer programmes; the Year 4 figure includes the 4-year degree graduates in regulation time plus the *n*+1 graduates from the 3-year diplomas and degrees, hence the unusually large increase in the percentage.

Table 4: Latest available completion rates: Percentages: All 3-year undergraduate diplomas: Contact + distance students (disaggregated figures not available)

Graduated within:	Contact + distance students		
	<i>All</i>	<i>African</i>	<i>White</i>
Regulation time (n years) (2013)	20.9	19.9	29.7
n+1 years (2012)	30.9	29.8	40.7
n+2 years (2011)	40.6	39.7	48.5
n+3 years (2010)	46.7	45.7	55.2
10 years (2006)	46.2	45.7	49.7

Extracted from DHET 2017a

Notes:

1. In addition to there not being separate figures for the contact and distance modes, the DHET data do not show detailed performance differences between subject areas in a number of cases, which inhibits the development of targeted interventions.
2. These completion rates are extraordinarily low, with no group's rates reaching 50% even in 10 years of study in the cohorts for which sufficient longitudinal data are currently available.

Table 5: Latest available completion rates: Percentages: All 3-year undergraduate degrees: Contact + distance students (disaggregated figures not available)

Graduated within:	Contact + distance students		
	<i>All</i>	<i>African</i>	<i>White</i>
Regulation time (n years) (2013)	26.6	21.3	40.3
n+1 years (2012)	40.5	35.4	55.2
n+2 years (2011)	48.9	43.9	61.7
n+3 years (2010)	55.8	52.0	66.3
10 years (2006)	57.1	49.5	70.8

Extracted from DHET 2017a

Notes:

1. The consequences of insufficient detail and disaggregation are similar to those noted for the 3-year diplomas above.
2. Inequalities by population group are pronounced in this qualification type, with African completion rates being some 18-20 percentage points lower than Whites' in all but one case.
3. The fact that only just over half of African students are graduating even in 6 years is a major social, economic and financial concern.

Table 6: Latest available completion rates: Percentages: All 4-6-year undergraduate degrees: Contact + distance students (disaggregated figures not available)

Graduated within:	Contact + distance students		
	<i>All</i>	<i>African</i>	<i>White</i>
4 years (2012)	29.5	25.4	44.2
5 years (2011)	43.4	37.9	60.3
6 years (2010)	56.2	50.2	70.9
7 years (2009)	63.1	58.6	73.0
10 years (2006)	65.7	58.7	76.9

Extracted from DHET 2017a

Notes:

1. The consequences of insufficient detail and disaggregation are, if anything, greater here than in the case of the other qualification types because of the great variety of professional programmes and streams included, from 6-year medical degrees to 4-year Fine Arts programmes.
2. The qualifications included here are generally highly selective professional programmes that attract the most highly-qualified school-leavers with great potential to succeed –the African students, for example, represent the top few percentiles of African youth. The students must be expected to do well.
3. The cohort studies indicate that there has been considerable improvement in performance in these programmes in recent years, which is to be welcomed. However, it is a serious concern that – despite their completion rates being described in the cohort study as ‘more acceptable’ – still under two-thirds of all the students, and under 60% of the African students, are graduating. This has implications for equity as well as the availability of professional knowledge and skills.

Observations on the cohort completion data

Contact students

While the DHET data on contact students is minimal and insufficiently disaggregated by qualification type (which clouds the meaning of the figures) and by population group, it is nevertheless clear that overall performance remains disturbingly low. It is disturbing in terms of meeting national needs and also because South Africa’s low participation rates mean that the students represent a small and selected group that should be expected to do well. For example:

- Under two-thirds of contact students graduate even within 6 years.
- One-third have not graduated after 10 years.
- Improvement in performance in the longer degrees has positively influenced the overall completion rate but may mask the low rates in the 3-year qualifications.
- Performance is lowest in the 3-year diplomas, where participation by African students is exceptionally high and where growth, especially in technical and vocational fields, is much needed.

In terms of equity, as noted earlier it is critical to have disaggregation in order to see what is happening underneath the high-level patterns. The data by population group recently made available in the UCDP Ministerial Statement (see section 4.1) shows the value of such disaggregation clearly.

These same data indicate little change between the 2006 and 2011 cohorts in the 3-year qualifications where direct comparison is possible. Especially in relation to relative performance across qualification types and population groups, the patterns persist. There is, however, some decline in performance in 3-year degrees, overall and among African students, which is a concern.

The detailed DHET cohort tables show that many contact students take a long time to graduate, and some stay in the system for up to 10 years without graduating. This is very costly to the state. It is evident too that poor undergraduate performance narrows the pipeline to postgraduate studies, particularly in the case of African and coloured students.

Contact + distance students

Performance in distance education is exceptionally poor. The DHET highlights the importance of this on many occasions in the cohort studies. This drags down the overall completion rates. However, the overall performance of the contact students, who represent over 60% of total headcount enrolment, is also relatively low, with the result that contact+distance figures remain a serious concern.

This extract from the cohort studies summarises the position well:

... the overall throughput remains low with 54.4% of the 2006 cohort graduating after 10 years and 55.2% of the 2009 cohort graduating after 7 years. This means that just under half of the young people who enter undergraduate degrees (in either contact or distance mode of tuition) never graduate. This is a major challenge for the system as it not only is costly in monetary terms, with the huge investment in subsidies that do not result in graduates, but also in human terms as these young people leave the system without qualifications. (DHET 2017a: 20)

Conclusions regarding the current performance of the higher education sector

- The overall picture emerging from the available data is of a system that is still not functioning effectively, despite its relatively small size and the potential within its student body. It does not provide a sound platform for successful growth.
- The key patterns relating to poor overall performance, unsatisfactory time taken to graduate, no group doing well, and serious shortcomings in equity of outcomes remain broadly the same as those that prompted the Flexible Curriculum proposal. The overall picture, as shown by the latest data, continues to be one of a ‘low participation, high attrition’ system (Fisher and Scott 2011).
- As the DHET recognises clearly in its documentation, equity in performance remains a ‘major concern’. It is therefore puzzling that detailed data on this remain scarce. What data there are show persistently poor results for African and coloured students, and little change in 5-year completion since the 2006 cohort, at least in 3-year qualifications. The current outcomes of the system show failure to develop the potential of South Africa’s student body.

- The DHET’s published performance data are not sufficiently extensive and detailed to provide sound evidence for identifying systemic obstacles and confidently determining what interventions will best address the key problems in the sector, particularly equity. I would argue that the present state of the system does not support the contention that the current interventions are adequate.

Since the current picture remains unfavourable, the question of what is to be done hinges substantially on the extent to which there is an improving trend and whether it can be sustained. This is discussed below.

4.4 Critique of the DHET’s interpretation of improvement trends

Use of dropout rates as an indicator of performance improvement

Since their inception, the DHET cohort studies have placed much emphasis on decreases in the student attrition or ‘dropout’ rate as a key measure of improvement in performance. Moreover, the concept of ‘retention’ (avoiding dropout) has long been used internationally as a goal of educational development. The implication is that improvement in these measures leads to an improvement in completion rates. However, there are strict limits on how dropout and retention rates can legitimately be used to indicate improvement, for the following reasons:

- The dropout rate – as opposed to the so-called ‘stopout’ rate, which refers to students leaving then returning later to higher education – conclusively limits the completion rate. If 30% of the intake drop out of a programme, the maximum completion rate, over any period, will be 70%. Thus a deterioration in the dropout rate will inevitably have a negative effect on the completion rate.
- In contrast, retention does not have a positive effect on the completion rate until and unless the student graduates. As the DHET cohort studies show, some students – including contact students – remain in the system for many years (the studies show up to ten years) without graduating or dropping out. This has the effect of reducing the dropout rate.
- There is therefore a positive form of retention, which leads to graduation within a reasonable time, and a negative form, which is highly costly to the state in terms of subsidy that does not lead to graduates. It is also damaging to aspirant students who are blocked from finding a place in higher education, and often to the unproductive students themselves if they incur debt. The DHET approach does not distinguish between these two forms.

There are not large numbers who stay on unsuccessfully for ten years, but the costs accumulate from the first year. In fact, the potentially most misleading use of the dropout rate as a proxy for success occurs commonly in the first two or three years of study. This is because there are various factors that can *delay* dropout without addressing underlying learning-related obstacles to the student’s success. These factors can range from relaxation of academic exclusion rules to superficial forms of student support that do not embed essential foundational knowledge and skills. Such factors usually stop having effect at some point, and thus result only in deferred failure.

The cohort studies indicate that this unfortunate situation is present in the system, since it is evident that the reduction in dropout that has occurred has not resulted in a concomitant increase in completion rates. The DHET recognised this in 2015:

The system is getting substantially better at retaining students, but needs to more effectively convert retention into graduation in regulation time or as close as possible thereto. (DHET 2015: 20)

What does not seem to be acknowledged is that this ‘converting’ – which entails facilitating successful learning throughout the programme – is precisely the challenge that higher education has found most intractable for decades, and in itself points to the need for new systemic approaches.

There is thus good reason to be wary of the uses of dropout data. Analysis of dropout patterns can be a most valuable tool for identifying where critical blockages to student progression occur, but that requires more fine-grained data. The assumption that dropout rates can be used as a clear indicator of improvement should, I would argue, be avoided until their relationship to completion rates can be demonstrated. I am consequently focusing primarily on what the completion rates (the ‘Graduates’ tables in the cohort studies) indicate about systemic improvement.

Key issues in the assessment of improvement trends

As discussed in the previous section, the current picture of the system shows key flaws. The DHET broadly accepts this but points to an improving trend. There have clearly been improvements in a number of quantitative indicators since 2000 (the first year for which cohort data have been made available), which are greatly welcomed. However, the way in which the improvements are interpreted is critical as it will greatly influence what is to be done and the resources made available for this. In my view, since there is much at stake, the question must go beyond identifying that there is improvement. The key issues, on which policy and interventions should be based, are:

- In what areas, and among what student categories, is substantial improvement in performance occurring, or not occurring?
- What is the rate of change?
- Is the rate of improvement sustainable?

I would like here to make critical observations on the DHET’s interpretation of the completion data and then offer an alternative approach in relation to these questions.

Critique of the DHET’s approach to interpreting trends from completion data

1. In relation to the first question above, it needs to be said again that the levels of disaggregation in the DHET cohort data do not permit a detailed analysis of improvement trends, of the kind necessary for identifying underlying factors that may affect different groups, programmes and subjects differently, hence impacting on sustainability and interventions. In particular, the aggregation of contact and distance students, as well as the lack of detailed information by population group, blocks key forms of analysis relating to developmental issues. Examples of questions that cannot be answered include:

- Is graduation in regulation time (n years) and $n+1$ years – which in practice applies only to contact students – improving or not? This is a critical consideration for the planning of extended curriculum programmes, for possible further changes to the curriculum framework, and for the general cost and efficiency of the system.
 - To what extent is racial skewing of performance among contact students improving or worsening at qualification and programme level? This is a key question in relation to equity and specifically its promotion in SET and professional programmes.
2. The choice of points of comparison in examining trends is a key factor. Selecting one early cohort (from a long list) as the comparator with the latest cohort, and using that comparison to represent a trend, can readily mask a more nuanced view of changes and hence a more realistic projection of future developments. This is particularly the case in an environment, like the higher education sector, that has experienced substantial changes.

The DHET has used the 2000 intake cohort as the primary comparator since the first of its cohort studies. Periodising comparisons should have a clear motivation, such as marking significant changes in circumstances. In the latest cohort study, the aggregation of contact and distance students has led the DHET to using the 2000 and 2006 cohorts as the standard comparison in its notes on the Graduates tables, because this provides ten years of data for each of the cohorts. In addition, on occasion (e.g. pp 23, 83, 92) specific cases of an unusual jump in performance are singled out as encouraging. Concerns about this approach include the following:

- More recent cohorts are given little attention, even though the later data can provide a much better indicator of future developments.
- Account is not taken of key changes in the system that are likely to have impacted on performance or the comparability of data.
- No effort is made to consider the *rate* of improvement or make systematic projections of trends.

These concerns are not trivial since different approaches could lead to significantly different conclusions, which could in turn have considerable implications for the development of the sector. A possible alternative approach is suggested in the next section.

3. Whatever conclusions are reached about the rate of improvement, can it be sustained? Answering this question must entail considering factors – financial, educational or socio-political – that may impact significantly on performance across the sector. One such factor, which has the potential to have some radical effects on the nature of the sector, is enrolment growth. There is likely to be increasing pressure for this: from the targets of 50% growth by 2030 set by the National Development Plan and the DHET’s recent White Paper, by the need for economic development, and by the demand for access from marginalised youth, facilitated by improved financial aid. South Africa’s low and inequitable participation rates will make these pressures difficult to resist, even in the face of severe capacity constraints.

The White Paper declared, ‘As participation increases, universities must simultaneously focus their attention on improving student performance’, but this has been a major challenge around the world, seldom achieved. Since the bulk of any growth will come from the student categories that the DHET acknowledges are least well catered for by the present system, it is difficult to

envisage a positive improvement trajectory being sustainable without fresh thinking and interventions.

An alternative approach to assessing improvement in completion rates

My critique of the DHET's approach obliges me to offer an alternative perspective on examining and interpreting performance patterns and improvement rates which I regard as more appropriate. It is as follows. The data used here are those from the latest DHET cohort study.

Selecting appropriate periods for considering trends

In examining improvement rates it is important to identify significant changes in the system that are likely to have impacted on performance or the comparability of data, and to factor these into the selection of periods in which to seek patterns and make calculations. In my view, comparing, say, the 2010 cohort with the 2000 one is not comparing like with like because the environments were significantly different.

The first major change that occurred in the period covered by the cohort studies was the 'Reconfiguration of the Institutional Landscape', i.e. the mergers and incorporations that changed the nature of many institutions, mainly over the period 2003-2005. The changes improved the resources available to many students, though the turmoil involved in some mergers no doubt created difficulties for others. The changes were extensive, however, and could be expected to influence performance – predominantly among contact students – in the many institutions affected. Moreover, there were changes in some institutions in the way performance data were classified and managed, which caused discontinuities in the records. The DHET notes: 'At this time [2003-2005] there were instances where course codes and entrance categories were changed and South African Identity numbers were not useable...' (DHET 2017a: 14). Any step-changes in performance figures around the years 2005-2006, when most of the new institutional formations were taking effect, should be noted as a once-off effect.

A second significant event was the introduction of the new National Senior Certificate (NSC) school-leaving examination in 2008. This could be expected to have influenced the key matter of the preparedness of incoming students, with effect from the 2009 intake. Somewhat unusual completion-rate figures may be seen in some tables: interestingly, there were some dips before institutions and their admissions criteria adapted to the new standards. One would expect performance or improvement patterns to settle after the immediate effects of such changes.

A third development expected to have influenced performance was the establishment of state funding for extended curriculum programmes and the consequent development and expansion of this primarily structural intervention. The first funding cycle was 2004-2006, but it was not until key design and regulatory guidelines came into effect in the second and subsequent cycles, i.e. from 2007, that widespread improvement and expansion occurred. Extended curriculum programmes are designed to provide a strongly enabling teaching-and-learning environment for underprepared students, focusing on foundational learning in the first year or two of the extended programme, so they would be expected to reduce dropout rates, at least in the early years of study and predominantly among African and coloured contact students. DHET monitoring has produced

positive indicators of this, so the extended curriculum programmes might well have contributed to the improvement of first-year dropout rates for these groups since 2005 as reported by the DHET (DHET 2017b: 25). This intervention may also have contributed to improving African and coloured completion rates in this period; however, conversion of early success into graduation has been limited (CHE 2013: 70-90).

Taking account of these developments, and taking the view that (barring abnormal influences) the most recent years provide the best basis for future projections, I have identified the 2006 cohort as an appropriate base for (a) calculating some average annual rates of improvement for contact students, (b) considering patterns, and (c) making some basic projections. ‘Appropriate’ here means that the completion data between those of the base cohort and the most recent available data appear to provide a realistic basis for projections. The table used for this is the only one on contact students in the cohort studies (DHET 2017a: Table 3). The work is complicated by the fact that the table aggregates all 3-6-year qualifications, so it is not possible to focus on completion in regulation time, $n+1$ or $n+2$ years, which are important parameters for analysis. However, the intention here is to illustrate an alternative approach rather than produce definitive figures.

Illustrative improvement rates and projections

The following table shows some illustrative rates of improvement calculated from table 3 of the cohort studies (DHET 2017a: 18), using the 2006 cohort as the base and completion rates from Year 3 to Year 6. The number of years of data available for each calculation is indicated.

*Table 7a: Average annual improvement rates by time taken to graduate
All 3-6-year undergraduate qualifications; all **contact** students*

	Base cohort: 2006	
<i>Graduated after: (cumulative)</i>	<i>Years of data available</i>	<i>Average annual improvement rate (</i>
Year 3	8	0.14%
Year 4	7	1.49%
Year 5	6	1.98%
Year 6	5	1.71%

Source: calculated from DHET 2017a: Table 3

Also for illustrative purposes, a range of basic projections were made to calculate how many years from the present it would take for the graduation rates after 3 and 4 years (key parameters for achieving effectiveness and efficiency) to reach selected completion-rate targets, assuming the current average improvement rate could be sustained. Examples of notable results are as follows:

- A 60% cumulative completion rate within 4 years (a moderately efficient rate achievable if 60% of contact 4-year degree students graduate in regulation time and a similar proportion of contact 3-year qualification students graduate within $n+1$ years) would be reached in about 2034.

- A 35% completion rate within 3 years (requiring about 50% of contact 3-year qualification students to graduate in regulation time) would take some 375 years to be achieved.

These figures are of course only illustrative, and more useful detail would be available from data disaggregated by qualification and population group. However, projections of this kind, bizarre though the latter one may seem, can be most instructive in uncovering patterns and tracking obstacles to progression.

For example, the Year 3 projection spotlights the apparently intractable problem of graduation in regulation time from 3-year qualifications, which accommodate some 70% of contact undergraduates. The completion rate shown in table 3 of the cohort studies has improved by only 2 percentage points since the 2000 cohort⁴. This problem has been recognised in various studies for a long time. It is hard to regard the 3-year regulation time as a meaningful norm when only a small proportion of the intake achieves it. In fact, the Flexible Curriculum proposal argued that persistence with this formal but unrealistic norm is an obstacle to learning for many mainstream students because it constrains sound curriculum design and the provision of foundational learning opportunities. This is part of the motivation for a different, realistic and therefore flexible curriculum framework.

The low 3-year contact completion rate clearly has a knock-on effect on completion rates down the line. The 4-year completion projection, together with examination of completion patterns, highlights two related issues concerning interpretation of evidence of improvement:

- *How long can the economy and the society wait until the improvement attributed to current interventions reaches the levels of effectiveness and efficiency that are needed to speed up development? Is the status quo acceptable or immutable, or can we find more innovative approaches to substantially improving performance within the time frameworks that curricula are planned for?*

Interestingly, the average annual improvement rates for completion within 5 and 6 years are higher than those for 3 and 4 years, and the projected times needed for reaching desired targets would consequently be shorter. Understanding underlying progression patterns would be much enhanced by analysis of what is happening here. The higher improvement rates may indicate that increasing numbers of students (contact students in this case) are staying in the system for longer periods, repeating a number of courses (at cost to themselves and the state) and eventually graduating. There are important questions to be explored here, about what causes the blockages earlier on and what facilitates persistence and eventual completion.

However, relying disproportionately on improvement at these advanced stages of contact students' studies, as opposed to facilitating significant improvement at early stages, would not be in the interests of effectiveness, efficiency or cost-efficiency, or of the stakeholders, including the students and aspirant students. This is a key issue in considering what constitutes an effective curriculum framework for contemporary South African conditions.

⁴ This table includes students on 3- and 4-year qualifications, so the completion rate in 3 years is reduced by the presence of 4-year students in the cohort, who could not have graduated in this period. However, the point here is not the absolute numbers but the improvement rate. Moreover, it is known from other research that the actual 3-year completion rate of students taking 3-year qualifications is in any case very low.

- *To what extent are the current improvement rates sustainable?*

Projections will of course have no value if the assumptions on which they are based do not hold. A key assumption here would be that the current improvement rates calculated will be sustainable. I would like to note two factors affecting this sustainability.

The first factor is the prospect of *substantial enrolment growth* and its consequences for teaching and learning, as well as for the availability of sufficient institutional funding to support growth with quality.

The second factor is the *likely trajectory of improvement*, gleaned from existing data patterns. This means looking inside the numbers that produced the average annual improvement rates. Close inspection of a range of Graduates tables in the cohort study has shown interesting consistency in year-to-year completion rates organised by the number of years taken to graduate (as shown by the columns in table 3, attached at Appendix 1) and starting from the 2006 cohort. All seven tables reviewed are for contact+distance students and cover different qualification types or population groups. The absence of contact-distance disaggregation complicates the matter but it can be noted that in the data for the earlier years of the cohort – say, graduation after 3 and 4 years – the great majority of the graduates will be contact students. Some noteworthy patterns are:

3-year qualifications:

- graduation after 3 years: mainly flat
- graduation after 4 years: flat for 3 or 4 years, then a sharp rise, then a plateau
- graduation after 5 years: generally rising
- graduation after 6 years: significantly rising

4-year qualifications

- graduation after 4, 5 and 6 years: flat or declining

The big patterns here are:

- a) For 3-year qualifications: the plateau effect, as opposed to steady improvement, is pronounced for graduation after 3 or 4 years, which are the critical years for improvement of effectiveness and efficiency; the most recent years show little improvement. Greater rates of improvement are occurring in the later cohort years.
- b) For 4-year qualifications: after a period of considerable improvement, performance is flat or declining.

A significant conclusion that can be reached is that there can be no easy assumption of improvement occurring in graduation within regulation time or $n+1$ years in current circumstances. If graduation is shifting into later cohort years, this has key implications for the curriculum framework.

Effects of different perspectives on improvement rates

Table 7b shows how the average annual improvement rate would change if 2000 were the base cohort used.

*Table 7b: Average annual improvement rates by time taken to graduate: comparing 2 base cohorts
All 3-6-year undergraduate qualifications; all **contact** students*

	Base cohort: 2006		Base cohort: 2000	
<i>Graduated after: (cumulative)</i>	<i>Years of data available</i>	<i>Average annual improvement rate</i>	<i>Years of data available</i>	<i>Average annual improvement rate</i>
Year 3	8	0.14%	14	0.8%
Year 4	7	1.49%	13	2.2%
Year 5	6	1.98%	12	2.7%
Year 6	5	1.71%	11	2.6%

Source: calculated from DHET 2017a: Table 3

The differences are substantial. As argued above, I do not regard the rates from the 2000 cohort as a basis for realistic projections of future improvement. The point here is to underline the importance of determining the parameters of trend calculations on the basis of detailed periodisation.

The alternative analysis I have offered here is provisional. The main point of it is to illustrate the argument that key conclusions about improvement trends – which we see from the DHET testimony can have a major impact on development decisions – should be drawn on the basis of detailed data and analysis, preferably with the benefit of different perspectives.

4.5 Conclusions about the strength of the data as evidence for policy and interventions

As noted in section 1, the DHET’s rejection of the Flexible Curriculum proposal (and by inference similar ideas of structural curriculum reform) was and evidently remains based on the following grounds:

- a) the data informing the proposal were inadequate or are no longer applicable, and
- b) the DHET’s existing and planned teaching-and-learning interventions are sufficient, at the system level, to bring about the improvements in ‘access, success and throughput rates’ that are needed.

The data analysis in this section does not support these contentions, for the following reasons:

In relation to the data informing the Flexible Curriculum proposal:

- a) The understanding that the data used in the identification and analysis of performance patterns was derived from only one student cohort is not correct. Four cohorts were drawn on, with comparisons noted where appropriate, and the performance data shown in the proposal fairly represented the position. The data cannot be said to have been inadequate for the purpose.

- b) There is evidence that the performance patterns that underlay the Flexible Curriculum proposal are persisting. The patterns include low overall rates of completion within ‘reasonable time’, substantial discrepancies between qualification types, and racial disparities in outcomes. The persistence of these patterns indicates that the conclusions and recommendations in the Flexible Curriculum proposal cannot be said to have been invalidated by outdated or flawed supporting data.

In relation to the DHET’s data as evidence that the current teaching-and-learning interventions are adequate for bringing about the necessary improvement in the system:

- c) My analysis has shown that the forms – particularly the levels of disaggregation – of the quantitative data in the cohort studies which the DHET has published and on which it has evidently relied in concluding that its current and planned interventions are adequate, are insufficiently detailed to facilitate the types of analysis required for identifying obstacles to student learning and progression, and thus for determining what kinds of interventions are needed or most suited to addressing those obstacles. The DHET’s conclusions based on these data concerning interventions are consequently challengeable.
- d) Analysis of the DHET data on the current performance of the system indicates the outcomes are still unsatisfactory, particularly in areas that are critical for development and social cohesion. These areas include: overall completion rates; time taken to graduate; equity of outcomes across almost all parts of the system; 3-year qualifications (especially diplomas); and distance education. Some of these are recognised by the DHET. The system can still be described as a ‘low participation, high attrition’ one, and does not offer a sound basis for enrolment growth.
- e) The question of the extent and sustainability of improvement in the system, and the main areas and student groups in which improvement is or is not occurring, is therefore critical. The level of detail and disaggregation in the DHET’s published data does not allow for sufficiently in-depth analysis to address this question satisfactorily. However, my provisional analysis and illustrative figures, offering an alternative approach to exploring improvement trends, suggest that the rates of improvement – especially in graduation in regulation time and in $n+1$ years, which are central to considering the curriculum framework – are not sufficient for the substantial improvement of equity and efficiency that is needed. Assessment of current improvement and critical assumptions about future improvement therefore call for circumspection and more detailed data.
- f) I would thus argue that the current state of the system and evident assumptions about improvement do not support the contention that the current teaching-and-learning interventions are adequate for bringing about necessary change.

5. CRITIQUE OF THE ADEQUACY OF CURRENT SYSTEM-LEVEL INTERVENTIONS: THE RELATIONSHIP BETWEEN THE KEY DEVELOPMENTAL AREAS OF CONCURRENT STUDENT SUPPORT AND STRUCTURAL CURRICULUM CHANGE

5.1 The role of evidence arising from analysis of the teaching-and-learning process

While quantitative data have a key role to play as evidence, they have clear limitations, particularly in that they do not in themselves explain what underlies improvement or obstacles to improvement. It is therefore important to consider the volume of research on the obstacles to learning and equity in undergraduate education produced in South Africa in recent decades, in order to (a) understand key conditions that underlie the persistent negative performance patterns that have prevailed in South Africa for a long time, and (b) identify obstacles that, if not addressed, will severely limit improvement in future.

I am concerned that, in considering the central question of the adequacy of its current system-level interventions, the DHET's testimony has not dealt with key elements of the analytical argument presented in the Flexible Curriculum proposal or other relevant studies. I would therefore like to offer an overview of some of these elements. I am using the three main areas of educational development work outlined in section 3 as a framework for my analysis as I believe this will highlight the issues. They are (a) curriculum content and orientation, (b) delivery, including student support, and (c) design, specifically of the curriculum framework.

5.2 Locating current teaching-and-learning interventions within the main areas of educational development

Nationally-facilitated development work is already taking place in all three of the areas, so the issue is what forms the work takes, what roles the interventions are expected to play, and what the best mix of interventions is to address the main problems. My view of which areas the main interventions are located in, and where my disagreement with the DHET lies, is as follows.

Curriculum content and orientation

The dominant current issue in this area, the calls for 'decolonisation' of the curriculum and related matters, is fully recognised in the DHET's forthcoming University Capacity Development Programme (UCDP) under the heading of Curriculum Transformation, and will be financially supported (DHET 2017b: 15). This is to be welcomed. The work is at an early stage and requires no detailed discussion here.

Delivery of the curriculum

As noted in my October 2016 presentation to the Commission, the routine, formal aspects of delivery, including teaching, assessment and faculty-based academic advice, are the core of the

educational process and must be funded from the block grant. The same should apply to academic activities such as tutorials and other forms of small-group, interactive teaching and learning, which many believe should be an integral element of the formal educational process but which have in a number of institutions come to be regarded as a desirable but optional extra, because of funding pressures.

This has meant that provision has had to be made for such activities, as well as a range of other learning and psychosocial support activities, in special DHET ‘earmarked’ grant programmes, particularly the Teaching Development Grant (TDG) (Yeld 2014). The TDG started in 2014 and is being subsumed into the UCDP, which commences in 2018. The UCDP will support a range of ‘student development’ activities, in the domains of ‘academic, life skills and psycho-social support’. In addition, the UCDP will cater for academic staff development programmes designed to enhance the quality of teaching. It may therefore be said that the UCDP intervention will facilitate a range of activities that fit under the broad heading of Delivery: student support and activities intended to enhance the formal educational process.

There is no dispute about the value of all these activities and services. Many of them have been in place in better-resourced universities for a long time. I have no doubt that they need to be in place in every university and for every curriculum, irrespective of its content, orientation and design – for contact education and as far as is feasible (with modifications where necessary) for distance education as well. It is thus not accidental that, as noted in the DHET testimony, a number of measures being put in place through the Teaching and Capacity Development grants are in line with recommendations I made in my Commission presentations. (I would like to note here that the recommendations concerned were not intended to imply that the interventions did not exist but rather that they should be protected and properly funded.)

What is in dispute is the role of these delivery-orientated activities, what they are being expected to achieve, and what they have the capacity to actually achieve. The student support activities among them (excluding extended programmes) fall clearly into the category of ‘concurrent’ student support, which, however valuable it is in its proper role, has been found over decades to be inadequate in itself for addressing the major mismatch between educational background and current university studies that affects a large proportion of the student body, for reasons outlined in section 5.3 below.

Design: the curriculum framework

Educational development work must be done in each of the main areas of the teaching-and-learning process. All the main categories of developmental work are needed, are interdependent, and are most effective when they are aligned and co-ordinated.

As outlined in section 3, the design of the curriculum framework is often taken for granted as the norm but in fact is not neutral and exerts a strong influence on learning. This is because the broad structure of the curriculum frames everything that is done in the formal teaching-and-learning process, determining to a large extent what levels of teaching and learning can occur and what

cannot. This in turn is a major determinant of what categories of educational background will have a reasonable probability of successfully completing their studies.

The design of the curriculum framework affects content and orientation because the substance of any curriculum needs to be made accessible to the students from the beginning – hence the importance of appropriate assumptions about their prior learning experience – and throughout the increasingly demanding stages of the programme – hence the importance of provision of curriculum time for academic skills development and support through step-changes or transitions in knowledge domain that occur in many curricula (especially in professional programmes like Engineering or Medicine). A valuable term here is *epistemic access*, which refers to a student’s capacity to access new knowledge, enabled by productive linkage between prior learning and new cognitive demands. The curriculum framework has a key role in facilitating epistemic access, and hence success.

Substantial diversity of educational background in the student intake gives extra significance to curriculum design, because there will be diversity in preparedness for different stages of the programme that will commonly need, in the interests of fairness, to be accommodated through different pathways to the same learning outcomes.

The particular content and orientation of a curriculum will of course affect what is required in the curriculum structure, so the relationship is iterative. Successful alignment of these two fundamental aspects of any learning programme is critical for the realisation of the intentions of the curriculum for the full spectrum of the student intake.

A second critical relationship, of central relevance here, is that between design (of curriculum structure) and delivery. The effectiveness of the curriculum framework – the extent to which it facilitates epistemic access across the student intake – will strongly influence the effectiveness of delivery. If there are articulation gaps (for example between secondary and tertiary education), the burden of trying to compensate for this falls squarely on delivery, and tends to divert energy and creativity into providing for basic learning and minimum standards rather than facilitating ‘deep’ learning and the other graduate attributes that are seen as having growing importance in the contemporary world. The relationship is also iterative; for example, a highly sophisticated, well-resourced delivery process, driven by academics with systematic knowledge of teaching and learning and aided by favourable staff-student ratios, can much more readily compensate for a flawed curriculum framework than a hard-pressed one.

The curriculum framework can thus be said to either enable or constrain the other key aspects of the teaching-and-learning process. The relationship between design – particularly of the curriculum framework – and delivery – particularly the concurrent student support elements of this – is central to assessing the adequacy of the DHET’s current interventions, so is discussed more specifically below.

The DHET’s current interventions in the area of curriculum structure are Extended Curriculum Programmes, funded since 2004, and Higher Certificates designed for foundational learning, a new qualification being piloted in 2017. Extended programmes are designed to provide an enabling

curriculum framework for students who are underprepared for the regular curriculum. These interventions will also be discussed in more detail, in section 6.2.

5.3 The strengths and limitations of concurrent support

There is no dispute about the value of concurrent student support – learning support and psychosocial, careers and related forms of counselling – when it is used effectively for the purposes it was designed for. There are, however, limitations on what purposes it can serve, arising from its role and the contexts in which it is provided. As the term suggests, its core purpose and strength is to support an *existing* teaching-and-learning process, either by improving learning in the specific courses the students are taking (by means of tutorials and other interactive methods) or by assisting students with affective or motivational challenges (e.g. through psychosocial and careers counselling). Learning support, in particular, thus works *within* the parameters of specific courses and curricula. It makes a key contribution in this role, enabling marginally failing students to pass and enhancing the quality and depth of learning for many others.

However, concurrent support does not have the capacity to deal effectively with substantial underpreparedness in specific courses and curricula where the central problem is the inappropriateness of the parameters themselves – especially the underlying assumptions about the prior learning of the affected students. This limitation has shown up in academic development experience over the last three decades.

To help to concretise this matter, it may be instructive to reiterate (from my October presentation, slide 13) four major categories of structurally-related obstacles to the success of students who, however talented, are held back by a poor socio-economic and educational background, and often do not have the language of instruction as their mother tongue. The categories, with common examples, are as follows:

1. *The articulation gap between school and university*

The high-achieving Mathematics student from a rural school who was not taught calculus beyond some superficial standard forms, then enrolled in a traditional first-year Mathematics course which assumes a sound prior knowledge of calculus, will be behind the curve virtually from the start of the course. Despite her talent, this student cannot be taught calculus adequately at the same time as trying to master a course that assumes this knowledge – i.e. through concurrent support, especially in the normal form of an extra weekly tutorial that has to be fitted in while she is taking three or four other courses, in which she may be similarly burdened. The consequence is that she may never catch up enough to gain mastery or avoid failing.

However, if provided with an alternative entry-level course which does not assume prior knowledge of calculus and offers effective foundational teaching in this and other key topics, she is likely to thrive. This illustrates the key principle that ‘underpreparedness’ is a relative concept, and that a gap can be closed from either side.

2. *Lack of opportunity to explore subject and curriculum choice*

Large numbers of students from disadvantaging backgrounds have little or no access to career education before coming to university, and are in any case pressurised, by family or their own unmediated aspirations, to take up subjects or programmes for which they have no real enthusiasm or intrinsic motivation. Current South African mainstream curricula force many students into premature specialisation, and students are often well into their first year of a regular programme before they find that they have made curriculum choices that are far from matching their genuine interests and aptitudes. Many in this position fail or drop out, and then encounter major financial or institutional obstacles to switching to studies that give them a greater probability of succeeding.

Their options while in first year are very limited by the design of the regular curriculum – drop out early? try to gather a few credits to transfer? – and it is hard to imagine what concurrent support or counselling could do to alleviate the predicament, besides giving an early warning. In contrast, well-designed extended programmes have the capacity and time to expose students to a wider range of disciplines, learning experiences and advice before the critical choices have to be made. Where a radical change has to be made, e.g. to a quite different qualification, the comprehensive orientation, maturation and socialisation provided for in effective extended programmes are likely to stand the student in good stead in the new academic environment and possibly enable the student to undertake regular courses directly, with greater confidence and success.

3. *Lack of sustained development of academic literacies that are essential for successful higher learning*

It is common for a first-year Social Science course to require students to write an analytical essay around week 6. This is a demanding but feasible undertaking for a well-prepared student, but the great majority of matriculants who are from under-resourced schools and have English only as an additional language will never have written a discursive essay of any kind before. To get to grips in such a short time with the difficult tasks involved – including reading complex texts in English, constructing a comparative analysis and writing this up in the discourse of the discipline – is a daunting challenge which many cannot meet.

Again, it is not feasible for these students to acquire sufficient mastery of academic language skills, in English, within the limitations of standard concurrent support inserted into an already demanding first-year curriculum. Alternative and more realistic courses are required to enable such students to realise their potential. Moreover, it is now well established that academic language demands – and often those of other ‘new literacies’ such as quantitative, information and visual literacy – continue and become more sophisticated throughout a curriculum. It is important to make curricular provision for this. There is a substantial body of literature on language development issues of this kind, as well as a growing amount on the other literacies. The language issue, in particular, is arguably one of the predominant educational challenges in sub-Saharan Africa, and is not amenable to other than in-depth resolution.

4. *Key intellectual transitions within curricula for which students from different backgrounds are differently prepared*

Curriculum research has shown that Engineering degree students have to negotiate their way through no fewer than four or five transitions in knowledge domain in the course of the undergraduate curriculum. Examples are the transition from basic sciences into engineering sciences, and into the key area of design, which is fundamental in engineering disciplines. The background or contextual knowledge required for these transitions is taken for granted in curriculum design, and is in fact possessed by students who have been exposed to the relevant ways of thinking in their school or home lives. But there are increasing numbers of Engineering students who have not had such exposure, and are tripped up by the transitions; this accounts for some of the failure that occurs without obvious reasons in the latter stages of the curriculum.

If this is to be averted, again appropriate curricular provision must be made, as attempting to interpolate concurrent support of the necessary depth into an already 'jammed' curriculum is unrealistic and counter-productive. There are substantial curriculum transitions in a range of programmes, especially professional programmes where greater inclusivity is a priority, and addressing them decisively is necessary both for equity and for expanding the pool of advanced knowledge and skills in the country.

As may be evident in these examples, concurrent support mechanisms like additional tutorials, mentoring or peer learning are not designed to have the depth or intensity to deal with these major challenges. Considerable research literature has been produced concerning the importance of integrating conceptual and skills development into regular courses and curricula rather than relying on concurrent 'add-on' approaches. It is important to note that the DHET's guidelines for extended programmes explicitly exclude funding for conventional concurrent support on the grounds that it is not effective in dealing with substantial underpreparedness and also overloads the students who most need not to be overloaded.

This has implications for the curriculum framework. A critical limitation in the status quo is that there is no time, or 'curriculum space', in the current regular curricula to address the key structural challenges, by means of either concurrent learning support or additional formal provision. Moreover, students from different educational backgrounds need different forms and levels of developmental provision, and this diversity dictates that there need to be different learning pathways available to cater for the full range of the student intake. This in turn calls for alternatives to the existing curriculum structures that allow the time and curriculum space to deal with the effects of inequalities.

5.4 Critique of the DHET's position on the relationship between concurrent support and curriculum structure

Balancing concurrent support and structural change

Since concurrent support forms such a large component of the University Capacity Development Programme (UCDP), which is the DHET's major forthcoming teaching-and-learning intervention, the matter of the strengths and limitations of this kind of provision, and its relationship with structural interventions, is a critical consideration. The substance (as well as the articulation) of the UCDP goals, as contained in the recently-released Ministerial Statement on this project (DHET 2017b), is admirable, so it is important to analyse whether the mechanisms envisaged are fit for the purpose of realising the goals.

The Ministerial Statement states that the aim of the UCDP is to develop 'a comprehensive programme that is DHET's primary vehicle to drive transformation in the sector' (DHET 2017b: 3). It is also clear in much of the transcript that the UCDP is intended to carry the main weight of the DHET's strategy for improving the performance of the system. The UCDP occupied the bulk of the DHET's presentation, and the DHET indicated that '... we do think that given the time and necessary funding, that we are going to be able to make the kind of inroads into [the] kinds of indicators that we have set up (Fees Commission 2017: 22). It will have a budget of R900 million when it is introduced in 2018, in comparison with an expected R350 million for extended programmes.

At the same time, the DHET accepts the principle and practice of providing a different curriculum framework – allowing for different pathways through the curriculum – for those who need it. In fact, according to the transcript, following its analysis of the Flexible Curriculum proposal the DHET decided to expand participation in extended programmes from the current 13% of the first-time entering headcount intake to 30%, and is engaged in developing new extended programme policy that will strengthen the form and functioning of this intervention significantly. Its decisions to continue supporting and to grow extended provision are welcomed.

Given this and the fact that there is no dispute about the value of concurrent support for the purposes I endorse in section 5.3, the disagreement between the DHET and the recommendations of the Flexible Curriculum proposal must be primarily about *scale*. The key question here is thus: 'What is the proportion of the current and future student intake for whom an acceptable and fair probability of succeeding depends on their having a curriculum framework and alternative pathways to completion that match their educational background?' as this will not be achievable by concurrent support alone.

The scale of the need for extended provision

In relation to this key question, the gap between the views of the DHET and the conclusions of the Flexible Curriculum proposal is considerable.

The Flexible Curriculum proposal's summary of the position for *contact* students, based on the prevailing completion rates, is worth recalling, for the numbers and also the student categories used in the calculations:

In summary, the data indicate that the majority of the current intake of contact students would stand to benefit from a new curriculum structure of the kind envisaged. The patterns indicate that, for up to 40%, this may offer the only realistic opportunity for success, as opposed to an overwhelming statistical probability of failure. For another substantial proportion, i.e. students who take additional years to graduate for academic reasons (estimated as 20%-25% of the intake), effective extended provision would be most unlikely to increase total study time, and would be far more likely to improve the quality of their learning. The proportions are higher for African and coloured students. (CHE 2013: 98)

When the proportions were reviewed for my October 2016 presentation using the then-latest DHET and CHE data, the patterns were similar, showing that some 35% of contact students had not graduated even in 10 years, and that 55% of contact students had not graduated within $n+1$ years. (As shown in Table 1, the most recent DHET figures reflect little change in 3-year qualifications either.)

Moreover, racial skewing continued to emerge, with some 60% of African contact students, in all 3- and 4-year qualifications, not completing within $n+1$ years. Allowing for a proportion of these students failing to complete for reasons not related to learning, it is evident that around half of African contact students would be likely to benefit from extended provision. The status quo in the teaching-and-learning process is not working to the advantage of large numbers of students from the majority population group. Since this proportion is set to increase with further enrolment growth, the implications for equity – with all that entails – are far-reaching.

In contrast, the DHET's decisions on extended programmes reflects a very different view of the level of need for an alternative curriculum framework. The planned expansion of extended programmes to 30% of the intake is due to be completed only in 2026 (Fees Commission 2017: 19). This means that for some years still, over 80% of the contact student body will not be able to benefit from extended provision, and even in nine years' time only 30% of first-time entering contact students will have access. It must be anticipated that by this time enrolment will have grown appreciably, with a concomitant increase in the average level of underpreparedness. Account must also be taken of the large proportion of students in distance education who, judging from the alarmingly low completion rates there, require interventions that go much deeper than the kinds that are exist or are contemplated at present.

What then will be the prospects of success for the large numbers of students who are severely affected by the structural obstacles outlined above but will have access only to concurrent support, which analysis indicates does not have the capacity to successfully address them? A major concern is that the DHET approach – relying on the adequacy of current interventions, as well as devolving responsibility to the institutions to develop further support measures (discussed below) – is not balancing developmental initiatives across the areas of delivery and structural design.

Competing or complementary interventions?

The 2015 Higher Education Summit Declaration resolved that: 'Flexible curriculum pathways and improved use of data analytics are two important vehicles for addressing student success' (DHET 2017b: 3). However, the testimony transcript clearly suggests that the UCDP approach, particularly in terms of its concurrent support elements, is juxtaposed *against* structural curriculum reform:

We have examples that we [have] seen at universities internationally where they manage to move what we call the triple threats in the graduation in the system from 48% within a five year period. Not by making longer curriculum, but by putting in place other kinds of interventions which enabled a bit of support for students to enable success. And so, we try to build that into our university capacity development programme, which is really about the programmes we are implementing [for] strengthening the system to build success in the system. (Fees Commission 2017: 14)

My understanding from this and the general tenor of the testimony is that, in planning new interventions for the majority of the student body, the DHET is positing concurrent support and structural curriculum change as competing approaches, between which a choice must be made, rather than seeing a need for substantial development in the areas of both concurrent support and structural design. In view of the extent of the improvement required in higher education, I would argue that this risks creating a false dichotomy between two forms of intervention that should be complementary.

The key point here is that concurrent support and structural reform – the latter focusing on the development of a curriculum framework that is fair to the full range of students – are fundamentally complementary. Neither can be a substitute for the other. Just as good curriculum design cannot be realised without sound delivery, sound delivery cannot counteract the effects of inappropriate curriculum design. Moreover, the effectiveness of delivery, including concurrent support, will be greatly enhanced by an enabling framework that caters fairly for talented students from all educational backgrounds, since this means that the delivery system does not have to take full responsibility for compensating for educational inequalities.

In summary, the analysis in this section points to the need for more to be done in the structural area, in the interests of providing for (a): the substantial proportion of current students for whom extended programmes are not available and concurrent support is not adequate; and (b) most importantly, the needs of the majority of the students who will make up the planned (or inevitable) growth in enrolment over the next decade.

If this analysis is seen to be flawed, it would be valuable for the critique to be set out systematically. In particular, I would argue that, if this has not already been done, the DHET should publish analysis, and as far as possible concrete evidence, to substantiate its heavy concentration on concurrent student support in the teaching-and-learning elements of the UCDP, in preference to further development of structural curriculum interventions. The Ministerial Statement on the UCDP does not provide any detailed motivation or substantiation of this kind. The DHET testimony refers only to the UCDP having drawn on ‘international experiences’, which are not identified (Fees Commission 2017: 12 & 14). Clearly, when using such experiences as models, much care has to be taken that the contexts are comparable (as discussed below).

The value of substantiation is increased by the fact that the UCDP is a new initiative, to be introduced in 2018, and the current form of the Teaching Development Grant, which has informed the UCDP, has been in operation only since 2014. Expanding debate on the choices made in the UCDP – their motivation, underlying quantitative and qualitative data, and the alignment between goals and mechanisms – would serve to strengthen the intervention and clarify the interdependence between delivery and design in particular.

5.5 Devolution of responsibility for researching and developing interventions to the universities

A key aspect of the UCDP approach, borne out in the DHET's testimony, is to devolve responsibility for researching and developing teaching-and-learning interventions to the universities, on the grounds that each institution's conditions are unique and that 'one-size-fits-all' interventions are not effective (see for example Fees Commission 2017: 16,21).

Few would dispute the desirability of institutions using approaches and interventions that match their specific needs. The burgeoning field of data analytics is expected to provide a major boost to the value, volume and ease of accessibility of data on individual students' learning behaviours and outcomes, which can be aggregated up to provide information on trends and the design of support services.

However, I am concerned about the following:

- that, even when funding is provided, many institutions will lack capacity to undertake such fundamental work effectively;
- that institutions working separately on similar sets of problems will not be optimally effective or cost-efficient, even when incentives for collaboration are in place;
- that well-researched, nationally-developed strategies, adaptable to local needs, should not be under-emphasised; and
- most importantly, that work at institutional level will continue to be impeded by systemic problems – particularly those associated with inappropriately rigid curriculum parameters – that can only be dealt with effectively at national level.

As argued above, analysis indicates that the DHET's interventions are not yet adequate at the national level and that substantial systemic faults remain unresolved. This is likely to place unrealistic expectations and an undue burden on institutional initiatives.

In addition, given the UCDP's emphasis on data analytics as the central driver of universities' improvement initiatives (DHET 2017b: 10), it is necessary to have a clear understanding of the strengths and limitations of data analytics at institutional level.

The plan is that, at each institution, data analytics feed into an Early Warning System (or a similar diagnostic tool) that detects an at-risk student, who is then referred to an advisor, who in turn refers the student to an appropriate support service. The effectiveness of this depends on there being support programmes that can deal with the real obstacle to the student's progression. There are some key limitations here, for example:

- At the institutional level, the great majority of the services available are concurrent (almost all those listed in the Ministerial Statement are in this category), which, while valuable to many, do not have the capacity to deal adequately with structural obstacles like those listed in section 5.2.

- For the many students whose real need is for an alternative pathway through the curriculum, the most effective action would be transfer to an extended curriculum programme, but in the current extended programme model, this is viable only in the first semester of the first year.
- For these reasons, the goal of using data analytics to establish ‘student support activities that have the potential to address diverse student development needs and enhance their chances of success in the system’ (DHET 2017b: 11) is likely to have limitations.

The underlying point here is that diagnostic performance data of this kind are valuable only in so far as they are effectively utilised. This is not an argument against data analytics but rather a caveat about the expectations of system improvement that can be attached to them. This again has a bearing on the adequacy of the current teaching-and-learning interventions.

5.6 Comments on specific issues concerning concurrent support raised in the DHET testimony

Use of models and approaches from other countries

There is no doubt that much can be learned from development work abroad, but it is clearly essential to take contextual differences into account, especially regarding (a) the extent of educational and social inequalities in South Africa, even within the top decile of the youth in our majority population groups, and (b) the fact that the great majority of students do not have the language of instruction as their mother tongue.

An example arises from the following extract from the transcript in relation to selection of interventions:

Some international experiences show that simply by having an effective career development services and student advice you can improve students considerably. (Fees Commission 2017: 12)

Effective services of this kind are undoubtedly valuable, but if they were advocated as alternatives to interventions that address the much more fundamental obstacles to learning that are prevalent in the South African context, I would argue that it would risk underplaying the depth and consequences of the inequalities that the obstacles are rooted in, as well as the complex implications of different linguistic backgrounds.

‘Wrap-around’ support

The new student support approaches that are being developed within the ISFAP initiative have drawn considerably from the highly successful SAICA and Dell Foundation bursary schemes. It is worth noting that the concurrent support approaches they use have generally worked in tandem with extended curriculum programmes offered by the participating universities. This provides a strong example of the interdependence of concurrent support and an enabling curriculum framework.

5.7 Conclusions

My conclusions from the analysis in section 5 are as follows:

- In the South African context of far-reaching educational inequalities in the student body, there is a particular need to distinguish between the major areas of the teaching-and-learning process that have a direct impact on student performance and on equity and inclusivity within this – viz. curriculum content and orientation, delivery of the curriculum, and the design of the curriculum framework.
- It is necessary to distinguish the different forms of developmental work that fit within each area and to identify their functions and limitations.
- It is necessary to ensure that appropriate developmental work is undertaken in each area in the interests of facilitating student success and equity of outcomes. At this juncture, there is a particular need to balance developmental work across the areas of concurrent student support and the development of an enabling curriculum framework.
- This balance has not yet been achieved in the DHET’s suite of interventions, with additional development in the area of structural curriculum reform being necessary to meet the needs of students who are adversely affected by systemic obstacles.
- This challenges the DHET’s position that there is no need for structural curriculum reform, and its rejection of the Flexible Curriculum proposal in particular, on the grounds that the current system-level interventions it has established are sufficient to bring about the necessary improvement in student success.

6. CRITIQUE OF THE ADEQUACY OF CURRENT SYSTEM-LEVEL INTERVENTIONS: EXTENDED PROVISION: ROLE, ISSUES AND CHOICES

6.1 Context

The question for this section is : Are the current structural interventions – extended curriculum programmes and higher certificates – adequate for addressing the challenges of improving student performance now and in the future? If not, what is required, and why?

The Flexible Curriculum proposal argued that structural curriculum reform – designed to establish a curriculum framework that accommodates the full range of the student intake – is essential for equity and overall improvement in higher education performance. The analysis in this response indicates that this is still the case, for the same reasons: in essence, the need to enable students from all backgrounds to realise their academic potential.

The minimum requirements for an effective alternative curriculum framework are: to allow additional time for the developmental provision that many students need in order to overcome the systemic obstacles they encounter as a result of educational inequalities; and to establish entry levels that allow for curriculum assumptions that accord with the realities of these students' backgrounds. The generic term for programmes that meet these requirements is extended provision.

At present, the two interventions in this area are extended curriculum programmes and higher certificates for foundational purposes. The higher certificate model is still at pilot stage, but extended programmes have been recognised and funded by the state for over a decade, and are due to grow in enrolment. This state support has been widely welcomed and appreciated.

However, it has been argued here that it is necessary for extended provision to be expanded more rapidly and to be available for a significantly higher proportion of the student intake than is currently planned. This is because quantitative analysis indicates that, even with the planned growth of extended programmes, there are and will continue to be substantial numbers of 'mainstream' students (those admitted to regular programmes) who are affected by systemic obstacles but cannot be accommodated in extended provision or sufficiently supported by concurrent methods. How then might such expansion be achieved?

6.2 Possible expansion of extended provision using current models

Higher certificates

The proposed higher certificate model provides a stand-alone year of foundational provision as a separate qualification, designed for students who are underprepared for extended programmes. Graduates of the higher certificate would be able to enter the first year of a regular programme.

This model leaves the regular curriculum untouched. It thus assumes that: (a) the students will be able to acquire sufficient knowledge and skills in the year to constitute a sound foundation for degree or diploma studies; and (b) the regular curriculum does not require modification to facilitate these student's success. I am concerned that this model does not provide for ongoing structural support (of the kind discussed in section 5), evidently relying instead on concurrent support available in the regular programme. I am also unsure whether sufficient foundational grounding can be provided in a year at this level. However, there is a body of research on this kind of model, and the outcomes of the pilot are awaited with interest. Since there is as yet insufficient indication of effectiveness, I will not discuss its potential role in the expansion of extended provision here.

Extended curriculum programmes

Extended programmes have played a critical role in advancing equity in higher education, enabling thousands of students to graduate – many who would not otherwise have gained access to higher education, and many whose probability of succeeding in regular programmes was minimal. Extended curriculum programmes can certainly contribute much to the growth of extended provision.

At present, the DHET envisages that extended programmes will grow to accommodate 30% of the intake by 2026. It would be possible to expand their reach at an accelerated rate, particularly since, of the sum of students who would benefit from extended provision, there are currently considerably more out of extended programmes than in them. In my view, an effective mechanism to drive expansion would be the introduction of 'placement' policy in all universities, as envisaged in the DHET's draft new extended programmes policy. The purpose of placement policy is to ensure that there are procedures for identifying first-year students who are 'at-risk' – including those who may already have been admitted to a regular programme – and for enabling such students to be placed on or transferred to extended programmes, which will improve their probability of succeeding.

The advantages of using extended programmes for rapid expansion of extended provision include that: (a) they are well-established in the system, with decades of experience behind them; (b) they have a good record of dealing successfully with the school-university articulation gap through basing courses on realistic assumptions; and (c) the model will be strengthened by the proposed new policy.

However, there are also limitations on the effectiveness of extended programmes. These are identified and discussed in the Flexible Curriculum proposal (CHE 2013: 72), but the central point is that the model (with its regulatory system) was developed to serve a minority of the student intake. (This is the case not because the developers thought it was ideal but rather because it reflected the possibilities of the time.) Key limitations arising from this include the following:

- *Limitations on curriculum design:* Extended programmes have to be built around the rigid, one-size-fits-all structure of the relevant regular curriculum, which creates a number of challenges in the pacing and sequencing of material.
- *Stigmatisation:* Being a minority intervention seen to be for struggling students, extended programmes are vulnerable to negative perceptions, and to their students feeling stigmatised. This is not a simple matter as there is long experience of students identifying with the programmes and their teaching staff and crediting them for their success, and indeed growing

numbers are seeking entry to extended programmes voluntarily to improve their probability of succeeding. It is nevertheless a serious issue, not least in this unsettled period in higher education.

- *Scale*: Some extended programmes are already very large, but it is possible that some changes might have to be made to the administrative and regulatory system to facilitate significant, rapid growth. There are also possible anomalies to come: at what point does a minority intervention have to change its status, as participation in it approaches majority level?

The budgetary implications of expanding extended programmes are not large by higher education standards. The annual grant allocation, which could cover up to about 15% of the present intake, is approximately R350 million.

Expansion thus seems feasible. The question is, however, whether the current model offers the best basis for substantially increasing successful participation.

6.3 Alternative approach to expansion: a continuing case for the Flexible Curriculum model

The case for the Flexible Curriculum model has been made in detail in the Flexible Curriculum proposal. The points here are intended to reiterate some points of contrast with the extended programme model and to respond to matters raised in the DHET testimony.

- *Scale*: A key element of the original motivation behind the Flexible Curriculum proposal was scale. It came from a longstanding expectation that the proportion of students who would benefit from or require extended provision would become a majority. What is in the interests of the majority should surely become the mainstream. Thus the vision was to follow the extended programme principles regarding equity of opportunity and realisation of potential, and take them to scale.
- *Vision of a unified but flexible curriculum*: This motivation grew into consideration of how the full student body might best be served. The vision emerged of a unified curriculum framework that would effectively and fairly accommodate all students but that overtly recognised and catered for inequalities, and the diversity arising from them, as a currently unavoidable feature of South Africa's society and education system. This would be achieved by means of flexibility in approach, particularly in key parameters such as entry assumptions and the provision of different pathways through the curriculum. The latter would culminate in the same learning outcomes for all, as there could be no compromise on exit standards.
- *One size does not fit all*: The DHET testimony refers a number of times to the inappropriateness of one-size-fits-all approaches to student support in the institutions. It must be asked why this principle should not apply equally to the curriculum framework, given the powerful influence this has on inclusiveness and student success. One-size-fits-all is surely an anomaly in any highly diverse organisation or system, yet regular undergraduate curricula are organised largely in that way. In fact, being able to cater flexibly for the student body as containing a continuum of

learning needs, thus avoiding undue compartmentalisation, is in my view an aspiration for the Flexible Curriculum.

In the first instance, however, the main design challenge of the Flexible Curriculum is to create coherent curricula for at least two core pathways, based on 3- and 4-year paths for the current 3-year qualifications, and 4- and 5-year paths for current 4-year degrees. This goal has generally been out of reach in the extended programme model – as noted earlier, having to work around a rigidly-structured regular curriculum interferes with coherence.

However, its feasibility has been exceptionally well demonstrated by five small teams of academics, who are experts in their own disciplines and in curriculum development, who were commissioned to work on flexible curriculum design in five major qualifications. The teams were assembled from around the country to analyse the Flexible Curriculum proposal critically, consider possibilities creatively, and produce concrete curriculum exemplars of what advances could be afforded by the flexibility of the framework. They succeeded in their mission, designing alternative pathways that are coherent in themselves but utilise common building blocks as far as possible, to foster additional flexibility. Aspects of the exemplars contribute towards realising the longer-term aim of de-emphasising the year-by-year timeframes that characterise many traditional curricula, and thus moving towards designs increasingly favoured in various systems as suiting contemporary life conditions.

- *More time for what?* I refer to the following extract from the DHET testimony:

For us, it is not just about more time to study, or expansion or extension of the curriculum, it is also about the quality of time that is being spent. So, what are students doing during the time they spend for their degree studies? We need to think about things like the nature of the curriculum. It can't just be more of the same. (Fees Commission 2017: 17)

I believe that the implications about the Flexible Curriculum here do an injustice to the proposal and the expert contributions to it. The introductions to the curriculum exemplars, and the other text accompanying them, show how some additional curriculum space and flexibility can be utilised to improve the quality (including depth and breadth) of learning, rather than simply re-arranging modules. It is interesting that the design challenge stimulated creativity in the exemplar teams, with the result that the products became good examples of the Scholarship of Teaching and Learning. Curriculum designs must of course be fully practicable as well, as I believe is demonstrated in the course-by-course depiction in the diagrams. I do not know what exactly is meant by 'the nature of the curriculum' here, but I believe that the exemplars show that they are not just 'more of the same'.

The transcript continues:

It has to be a curriculum that is much more responsive to the needs of students; that cares for students from where they come from; the examples of the calculus, and the gap between what they do in matric and what they are doing in the university; that cares for them appropriately to [c]over those gaps and also care for them through their degrees. (Fees Commission 2017: 17)

I would argue that the Flexible Curriculum, as envisaged, is intended to be a vehicle for accomplishing these things. I would add that responsiveness to students should include being

responsive to their learning needs, including the need for epistemic access, and that an enabling curriculum framework has a key role in facilitating this.

- *Equity*: The Flexible Curriculum model is designed with the aim of advancing equity at its core, as a founding principle. It is intended to link equity of access with equity of outcomes. This reflects the view that continuing lack of equity is arguably South Africa's central challenge, not least in education (see section 2). It follows that every substantial educational initiative proposed or undertaken, particularly in higher education, should include strategies for dealing with diversity, and improving equity of access and outcomes, as a *sine qua non*.

A key part of the Flexible Curriculum approach to equity lies in normalising learning needs that have been regarded as abnormal and 'non-traditional', even though they were present in what has become the majority of students. This stands to remove the stigma that has rightly or wrongly been associated with extended programmes. This kind of stigma and marginalisation is unlikely to be overcome until the provision concerned is recognised as a norm.

On a number of occasions in the cohort studies, the DHET fully acknowledges that equity, particularly the ongoing racial skewing in performance, is a major concern and transformation issue, and that further research is needed to address it (see for example DHET 2017a: 45,71,96,135). There is no doubt that this is the case, but it is puzzling that reference is not made to the considerable body of existing research on this topic.

- *Accommodating enrolment growth*: A practical aspect of the Flexible Curriculum is that, because it is a unified model, it can readily accommodate fluctuations in the proportions of students needing more or less developmental provision over time. This applies to its proposed funding model as well. This indicates that the model can offer a sound base for enrolment growth, which may well entail significant fluctuations of this kind.
- *Cost*: As is the case with extended programmes, the extra costs to the state of implementing the Flexible Curriculum model, for which extensive projections were made, are modest, and in fact can be seen as investment since it is forecast that costs per graduate would come down (CHE 2013: 136).

In this regard, it is of note that, in the 2015 Summit documentation, the DHET used five years as a completion benchmark for contact students, referred to as 'regulation time or close thereto' (DHET 2015: 22). Does this mean that the DHET has come to see five years as the norm, and thus expects, and is willing, to subsidise higher education on that basis? This is an important question in that the duration norm has been a matter of contention, including in relation to cost.

- *'Not just about curriculum'*: The DHET's testimony emphasises, on several occasions, that student performance is affected by a wide range of factors, which have to be addressed as far as possible (see Fees Commission 2017: 12,14). It may be noted in response that this is almost universally accepted in higher education sectors, and the Flexible Curriculum proposal acknowledged it clearly (CHE 2013: 54-57). However, as the proposal and the analysis in this document have sought to show, curriculum – in its structure as well as its content and orientation – has a major effect on inclusiveness, equity and overall success, interacting with and influencing the other major areas of the teaching-and-learning process. I would argue that

structural curriculum design – in its broad and its detailed facets – is a valid and significant area of research and development.

6.4 Conclusion

In so far as additional development in the area of structural curriculum reform is necessary (as argued in section 5), expansion of extended provision can be achieved by expansion of the existing extended programme model, with changes to the regulatory and administrative procedures possibly being necessary.

However, owing to limitations that are inherent in the current extended programmes model, a broader model that provides for different curriculum pathways, accommodates all students and can function on a large scale should be considered. The Flexible Curriculum model that has been proposed fits these criteria.

7. OVERALL CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Response to the DHET

As noted in section 1, the DHET's rejection of the Flexible Curriculum proposal (and by inference similar ideas of structural curriculum reform) was and evidently remains based on the following grounds:

- a) the data informing the proposal were inadequate or are no longer applicable, and
- b) the DHET's current teaching-and-learning interventions are sufficient, at the system level, to bring about the improvements in 'access, success and throughput rates' that are needed.

The quantitative and qualitative analysis in this response does not support these contentions. The detailed reasons for this are summarised in the Conclusions to sections 4-6. In short:

- The DHET's criticisms of the validity of the data in the Flexible Curriculum proposal, and the relevance of the data to current circumstances, are not supported. In particular, the analysis indicates that the performance patterns on which the Flexible Curriculum proposal was based are persistent.
- The analysis indicates that the DHET's published data are insufficiently detailed to facilitate the types of analysis required for identifying obstacles to student learning and progression, and thus for determining what kinds of interventions are needed or most suited to addressing those obstacles.
- Analysis of the current state of the system and of improvement trends and projections does not support the contention that the current suite of interventions put in place by the DHET are adequate for bringing about necessary systemic change.
- Analysis of the interventions in place in the key areas of the teaching-and-learning process indicates that, in the interests of equity as well as overall improvement, the biggest need is for substantial expansion of extended provision.

In relation to future possibilities:

- Expansion of extended provision could be accomplished either by expanding the existing extended programme model or introducing a more far-reaching and comprehensive curriculum framework that would suit the scale of the need.
- The reasoning and principles underlying the Flexible Curriculum proposal remain valid. It is important for structural curriculum reform to be given due prominence along with the other aspects of curriculum design being considered, and with appropriate support models.
- Equity remains a key challenge and should be central to all initiatives related to teaching and learning in higher education. There appears to be no justification for allowing systemic flaws to

continue unfairly burdening and impeding the very students whose talents are least tapped and who most need to be successfully accommodated in the system

- A key aspect of the motivation behind the CHE's advice to the Minister on the Flexible Curriculum proposal was the following:

The Task Team's proposal is a radical departure in that for the first time the challenge of teaching and learning is addressed from the perspective of the majority. The proposal that a revised undergraduate curriculum structure should become the norm addresses the stigma that was previously attached to academic support and development programmes, including extended curriculum programmes, which were perceived to be based on a "deficit" model targeting African students. It also means taking to scale interventions that hitherto have benefited at most 15% of an intake of students. (CHE Advice to Minister 2014: 8.4)

Recommendations

The DHET be requested to:

- publish detailed cohort data that are sufficiently disaggregated – by mode, qualification type, qualification (limited to qualifications with large enrolments), population group and gender – to allow for detailed analysis of performance patterns and trends;
- provide for a substantially more rapid expansion of extended provision than is currently planned; and
- to reconsider its decision to reject the Flexible Curriculum proposal, and consider re-opening discussions with stakeholders regarding the merits of introducing this or similar measures to deal more radically with the twin needs for overall improvement in outcomes and for equity of outcomes.

IR Scott: 25 April 2017

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Extract from DHET 2017a: 18

Table 3: National total % dropout and graduates for 3 to 6 year undergraduate qualifications in contact tuition

Intake year (Year 1)	GRADUATES (%)							
	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
2000	18.8	35.1	44.2	49.3	51.9	53.4	54.4	55.2
2001	18.3	34.3	42.9	48.2	50.6	52.0	53.0	53.7
2002	18.4	34.5	44.2	49.2	51.6	53.0	54.0	54.7
2003	18.6	36.9	46.5	51.7	54.1	55.6	56.6	57.3
2004	18.7	37.1	47.5	52.9	55.5	57.2	58.2	59.0
2005	19.8	40.0	51.3	57.1	60.0	61.6	62.7	63.6
2006	20.6	41.9	53.5	59.7	62.7	64.5	65.8	66.7
2007	19.5	41.3	53.9	60.4	63.7	65.7	67.0	
2008	19.3	41.8	54.6	61.4	64.8	66.8		
2009	17.5	40.4	53.5	60.7	64.3			
2010	19.9	44.0	57.2	63.9				
2011	20.0	45.5	59.0					
2012	20.2	45.8						
2013	20.8							
2014								