

**CHET
POLICY / CHANGE DIALOGUES**

REPORT

**Organising the Curriculum
in the New
Comprehensive Universities**

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1. REPORT ON THE SEMINAR – TRISH GIBBON

Introduction

This seminar was planned to respond to some of the needs arising out of the current process of restructuring of the higher education system in South Africa, a process which includes the creation of a new institutional type, the comprehensive university. The recommendation to create such institutions, that would offer a combination of technikon and university-type programmes, was made by the National Working Group in 2001. The goal articulated by the NWG was “to facilitate the effective and efficient provision of higher education” (Department of Education, 2001b:18). In accepting this proposal, the Ministry of Education reformulated the primary intention behind the creation of comprehensives in the following terms: “to strengthen the provision of technikon programmes through ensuring that technikon programmes are available throughout the country, in particular in rural areas, which are currently inadequately serviced in terms of technikon provision” (Department of Education, 2002:24). It also commissioned the writing of a concept document to begin to clarify some of the implications of merging a university with a technikon.

A critical dimension of such mergers is the way in which the curriculum is organised, or, to put it differently, the way in which knowledge is organised, in the institution. The curriculum in such institutions can be seen to span a wide range of knowledge domains, from the narrowly vocational at one end of the spectrum, to the general formative at the other. While the NWG proposed the simple maintenance of the ‘binary divide’ between programmes in these institutions, with university-type and technikon-type programmes running side by side, the reality of current programme provision is that there has already been much blurring of that distinction. In practice there has been considerable ‘poaching’ on both sides of the divide. How then should the curriculum be organised, particularly in the ‘grey’ areas where technikon and university programmes, all of which are in the higher education band, are not clearly distinguishable from one another and may in fact have significant commonalities? What principles should guide the construction of curricula in these areas? And how does the organisation of knowledge relate to institutional organisation? What are the most appropriate units of academic management and forms of governance to accommodate these arrangements of the curriculum?

In order to begin addressing some of these issues, a small group of people was brought together each of whom had an interest or expertise in these matters. Presenters included Trish Gibbon, author of the concept paper mentioned above, Dr Rolf Stumpf, Vice Chancellor of the University of Port Elizabeth, a university that will become part of a new comprehensive university in 2005, Jeanne Gamble who has just completed doctoral work in which she examines the forms

knowledge takes and the ways in which it is transmitted in the context of a highly vocational, craft learning environment, Prof Joe Muller, an expert on knowledge and curriculum issues, as commentator, and Dr Michael Young, an international expert on further education and the interface between vocational and academic training, as respondent. A full list of participants is appended to this report.

Opening and Welcome: Dr Nico Cloete, Director of CHET

In welcoming participants to the seminar, Nico Cloete said that the policy decision to create comprehensive universities was an accomplished fact, and no matter what divergent views might be held about such a decision, it would not be productive to debate the policy in this forum. Instead, the seminar was intended to advance and develop thinking about the implications of this policy for curriculum organisation, particularly for those institutions that had to implement it. If the ensuing discussions proved to be fruitful, it might be possible to take the outcomes to a wider audience at a later date.

Background to Curriculum Issues for Comprehensive Universities: Trish Gibbon, author of a concept paper on comprehensive universities.

Trish Gibbon started her presentation by saying that the brief for this commission had been particular: the paper was not to be 'academic' in nature, but should offer a range of options and suggestions for ways in which the institutions designated to become comprehensive might begin to think through the possibilities for organisational and programme restructuring to fulfil their new missions. These suggestions were to be drawn, as far as possible, from a survey of international experience of multiple purpose institutions and highlight their strengths and weaknesses for the South African context. In other words, it was to be a document that raised pertinent issues and stimulated debate and discussion in the sector as institutions sought to find their own solutions to their new mandate. As a consequence, the concept paper did not pretend to explore the theoretical complexities of the curriculum issues involved, although it did raise a number of important points in this regard. The presentation would attempt to draw out some of those issues as the platform from which it was hoped that seminar participants would extend and develop ideas to a greater level of sophistication.

She then briefly outlined the policy background, and referred to the argument advanced by the National Commission of Higher Education (NCHE) that differentiation or diversity in educational provision was a major challenge for all higher education systems, but that it also foresaw that "global and South African conditions are likely to push the single co-ordinated system towards a more responsive, dynamic and 'fuzzy' relationship between institutions and programmes ..." (NCHE 1996:165). The National Commission for Higher

Education (NCHE) had seen the necessity for certain conditions to be in place before the current binary division between technikons and universities could be softened, and for the most part, those conditions had been met in the establishment of planning, funding and quality assurance mechanisms. It was in this context that the NWG had made its proposals for the establishment of comprehensive universities that would offer a combination of technikon and university programmes under one roof, proposals subsequently accepted by the Ministry as referred to above.

Policy Goals and Objectives

Turning to policy documents, she said that comprehensive institutions in South Africa are expected to contribute to meeting a range of goals identified in the National Plan and which are seen as central to Government's Human Resource Development Strategy, including:

- “Increased access, in particular, in career-focused programmes with prospective students able to choose from a wider variety of programmes with different entry requirements.
- Improved articulation between the career-focused and general academic programmes, thus facilitating student mobility between different programmes.
- Expanded opportunities for research and the strengthening and development of applied research through linking emerging foci of the technikons to the current research strengths of the universities.
- Enhanced capacity (because of the broader range of expertise and foci) to respond to the social and economic needs of the region in general and of industry and civil society in particular.” (Department of Education 2002:24)

Reading off from policy, then, the desired characteristics of the South African comprehensive university seem to be:

- Diversity – through the offering of a wide range of academic programmes (vocational, career-focused, professional and general formative) of both university and technikon type.
- Accessibility – through the opportunities created by the different entry and exit points of technikon and university programmes.
- Student mobility – through developing strong vertical and horizontal articulation pathways.
- Responsiveness – through the development of a suite of educational programmes and research foci appropriate to local, regional and national needs.
- Flexibility – through the strengthening of relationships with community, civic, government, business, and industry partners for local and regional development. Flexibility should characterise the institutions' ability to meet the

human resource needs of the local (and wider) context through its training programmes, and contribute to the development of the communities it serves through the application and extension of its knowledge and expertise.

Institutional Variation

The question, however, was whether these generic goals and characteristics could be translated into a generic institutional or organisational form. This seemed unlikely given the very different base conditions – current mission and programme profile, academic and administrative capacity, infrastructure and facilities, mode of delivery, not to mention geographical location – out of which the six comprehensive universities are to be formed. Two of these institutions share similar features in that they are small, poor, rural, historically disadvantaged universities (the Universities of Venda and Zululand) that have frequently been crisis ridden in the past. They are expected over the next few years to refocus their mission by drastically reducing the number of university programmes offered and introducing for the first time a significant number of technikon (or technikon-type) programmes with lower entry requirements than those for university programmes.

A third comprehensive university, the Walter Sisulu University of Technology, will be a multi campus institution created out of three poor, historically disadvantaged institutions (two technikons and a university) which will offer technikon programmes for the most part. The only university programmes it will offer will be in the Medical School and Faculty of Education.

A fourth comprehensive university, very different in character and resources is the giant open learning and distance education institution, UNISA, formed out of the old UNISA, Technikon SA, and the distance arm of Vista. It is now the largest university in South Africa with over two hundred thousand students including enrolments from all over the continent.

Two other urban-based, multi campus comprehensives – the University of Johannesburg and the Nelson Mandela Metropolitan University in Port Elizabeth – are to be created out of the merger of existing universities and technikons.

While some of these institutions share similar features, the differences between them are striking. They will each face different organisational and curriculum challenges. Some will need to cut back on ‘weak’ academic programmes and ensure that the few that are retained provide a complementary arm to expanded and strengthened vocational, career-focused and professional programmes, while others with significant academic and research strengths will want to maintain and strengthen programmes on both sides of the ‘divide’ and guard against a drift that could weaken both academic and vocational programmes. The strengthening and regional expansion of technikon-type programmes, and the strengthening of applied research are central goals of this institutional innovation,

and institutions will have to guard against academic drift that could undermine this objective. All institutions will need to align their emerging programme profiles with their new missions which are themselves varied amongst the six designated institutions, and as a consequence, in each case, the appropriate balance between different kinds of programme will vary.

International Experience

Turning to international experience, Ms Gibbon reflected briefly on the way in which the term was used in higher education in other parts of the world. Internationally, 'comprehensive' is used fairly loosely by a number of different institutional types to signify a broad educational thrust and range of academic programmes, from career-focused to professional, from specialist to general academic, along a horizontal axis. It is also sometimes used to signify the range of qualifications offered by an institution on a vertical axis from sub-baccalaureate to doctoral. Universities, in particular, use the term to distinguish themselves from the liberal arts colleges, professional schools and other specialised institutions that have a focused, prescribed educational thrust. Any investigation of international models that may have experiences and practices that are helpful to us would need to penetrate deeper than this broad meaning and start to examine the roles and functions of institutions that share similar goals to those identified for the comprehensives, and look at who they serve and how they serve them, rather than simply focus on the descriptor 'comprehensive'.

To this end, she referred to the overview provided in the concept paper of various institutional experiments, reforms and solutions, in a number of different national systems, that were aimed at meeting the need for:

- making access to more practical forms of higher education available to the general public,
- programme diversity, and
- forms of education that were responsive to regional and national economic development needs.

In the United States, examples to which reference was made included the land-grant universities, various state and city systems, community colleges and two particular instances of universities that had colleges offering community college type programmes alongside colleges that offered more traditional university courses. British examples included the new universities (old polytechnics) and some recent FE/HE mergers. Finland had greatly expanded vocational and technological education through the creation of 31 polytechnics spread throughout the country, and the most interesting German example was the reform that created *Gesamthochschulen* (comprehensive institutions).

There is clearly no complete institutional fit between the examples that have been found and the proposed comprehensives in South Africa. In part, this is not so

much because of the unique nature of the idea of the comprehensives, but the relatively unique nature of the technikons. The institutions to which they most closely correspond are probably the Australian universities of technology, and the former polytechnics in Britain that have now acquired university status. All of these have certainly extended their mission beyond that of the institutions out of which they evolved, and offer programmes that are comparable to traditional university programmes in addition to those that have a strong technological and vocational orientation, but none has actually merged with an existing university. There is in other words, a tendency to emulate 'upwards' in these institutions, with only a few (London Metropolitan University being one of them) making a particular effort to enhance access and maintain a range of exit points and qualifications below the level of the bachelor degree. The German *Fachhochschulen* (universities of applied science) as they currently exist are also similar institutions to the technikons although the range of qualifications they are permitted to offer is restricted.

Most international examples of the combination of different kinds of institutions, or the combination of different kinds of educational provision, are across the FE/HE divide, unlike the South African comprehensive which is firmly located within the HE sector. This could well be a distinct advantage for the South African institutions. Many of the difficulties encountered in implementing reforms in comparable circumstances have arisen from distinct hierarchical differences in the levels of educational provision, and the credentials of staff that are brought together. Integration of programmes, curricula and academic staff have proved to be most problematic where levels, standards, qualifications and status have been most sharply differentiated. This is not to say that related issues will not arise in the South African situation, and that they will not require sensitive handling, but differences are unlikely to be as extreme as in some international experiences.

On the other hand, mergers across the further / higher education divide do not pose the same curriculum problems as will be encountered in the South African situation. Generally speaking, progression from further education courses to higher education courses is sequential, and the curriculum issues that arise relate to the vertical articulation between such courses of study. In the South African mergers of technikons and universities, the central curriculum issue that arises is one of horizontal articulation – whether and how higher education programmes with a strongly technical and vocational orientation can be brought into fruitful relationship with programmes that have a more academic or theoretical orientation.

Organisational Models

Two dominant models emerge: separate provision in distinct colleges (or faculties) with articulation pathways to degree and higher degree studies, or, an integration of provision across faculties with clear pathways for progression. The Universities of Northern Michigan and Southern Illinois provide variations on

these basic types. In those institutions separate colleges were created for those vocational programmes such as aviation or automotive technology that do not have an immediate correspondence to traditional university disciplines. Students in these fields qualify with *applied* degrees, either at the associate or bachelor level (the equivalent, perhaps, of a Bachelor of Technology). In other fields, such as business and commerce or communication and language studies, where there is a clear correspondence to a university programme, such distinctions are not made, and studies are part of a single programme with different exit points along a continuum of progressive qualifications.

Separate 'Colleges' – Single Management

The simple addition of the parts of different institutions would result in minimal change at the level of academic provision and management. Integration would occur only at the most senior levels of governance and management. The structural implications of this would be to maintain separate organisational forms for the delivery of technikon and university programmes. The advantage of this model is that it would certainly maintain the binary divide, if that is a primary objective. The only academic integration that would take place would be in areas of clear and unnecessary duplication where rationalisation of programmes could result in a single set of offerings. In such a case, the decision would have to be made as to whether this was now a university or technikon programme, which would determine where it was to be housed.

There are, however, a number of disadvantages to this model. The new institution would have only a nominal 'single' identity while in practice and in substance it would be split and would operate as two distinct organisations. At the levels of management and governance, it is likely that there would be intense competition for budgetary allocations and other resources and such divisions would almost inevitably permeate many other aspects of the institution's operations.

Integrated Faculties – Diverse Programmes

In this model, the educational fields within which different institutions offer programmes (in the case of mergers) are integrated into a common set of faculties, but programmes are differentiated. The adoption of this model requires careful and extended discussion of the most appropriate set of faculty structures to accommodate the full range of programmes offered by the merging institutions. In other words, this decision should rest on prior decisions about the programme profile of the new institution and how programmes will relate to one another. Decisions about smaller organisational units such as schools and / or departments are even more tightly dependant on how the curriculum is organised. The advantage of this model is that academic staff would be integrated immediately into faculty, school or department structures, and each faculty or school would reflect a diverse array programmes. There could be some

integration of technikon and university programmes where there is a clear disciplinary correspondence, with the possibility of different tracks (vocational/career and theoretical) and staggered exit points with appropriate qualifications. The binary divide in these instances will be manifest in the development of different pathways that have a greater or lesser vocational emphasis.

A third option would be a hybrid of these two in which there could be integration of some programmes into common faculties while other programmes for which little correspondence could be found in the other 'sector' would be housed in separate faculties.

Before turning to the possibilities for academic programme design, Ms Gibbon said it was important to begin unpacking the labels 'technikon' and 'university' as applied to programmes.

Technikon and University Academic Cultures and Characteristics

Universities and technikons have traditionally had very different visions and missions: they have served different cohorts of students, they have had different academic orientations, different qualification structures, different research profiles and different sets of relationships with external groups. Yet the way in which some knowledge fields have developed in combination with the demands of the economy for highly skilled personnel has meant that far greater areas of commonality have emerged between university and technikon programmes in these fields than is often acknowledged.

Technikons have a well-established academic culture that has distinct features. Academic programmes are directed towards occupations and they are intended to equip students with skills that are both marketable and immediately usable in their chosen field. This has shaped the pedagogy of diploma programmes: most students are required to complete some period of co-operative learning in the course of which they are placed in appropriate work settings and learn to apply classroom based knowledge in a real workplace environment.

The objective of training students so that they graduate with relevant skills has also made it particularly important for technikon curricula to keep abreast with developments in a wide variety of occupational fields. The instruments widely used to achieve this are curriculum advisory committees made up of members drawn from relevant occupational fields who advise on a number of issues including the correspondence of curriculum design and contents to the skills requirements of the field, new workplace needs and developments, and changes in the labour market. These relationships are also used to help in the placement of students for the in-service training requirements of their programme.

In addition, the broad framework of the curriculum for the national diploma, the qualification for which the majority of technikon students are enrolled, is set at a national level through 'convenor' technikons. Although technikons have the right to give substance to that curriculum with local content, the level of commonality established through the national curriculum framework does ensure some portability for students moving between institutions. The new universities of technology, formerly technikons, and the comprehensive universities will need to consider jointly if this is a valuable mechanism which they wish to retain, whether it continues to be part of new national academic policy or not. Within the curriculum, technikon students have little if any choice about their subjects.

Research is still relatively underdeveloped at technikons, but it plays an increasingly important role in finding practical solutions to industry problems and developing new applications for existing knowledge.

Students and staff in university professional programmes would not find this culture alien, but university academic culture traditionally manifests other features. Direct engagement with, involvement in and promotion of the interests of business and industry are eschewed in favour of some distance and separation from these concerns to enable students and staff to inhabit critical spaces from which to reflect upon, analyse and understand the dynamics that shape social, cultural, economic and political worlds. Universities have also traditionally exercised freedom to shape the curriculum for their programmes without reference to any binding national parameters other than the generic criteria established for all programme accreditation. Within academic programmes, students, in turn, have traditionally exercised considerable freedom in the selection of the courses comprising their programme, subject to approval by faculty deans. More recent developments have seen some universities introducing more tightly constructed academic programmes, particularly in the social sciences and humanities, that allow fewer choices for students, but there now seems to be a counter movement away from heavily prescribed programmes. Nonetheless, the effects of student and labour market forces have influenced the shaping of many university programmes in the direction of greater career orientation.

The freedom to pursue curiosity-driven research is prized in universities i.e. basic or fundamental research, in addition to the right to pursue research that is seen to have more direct relevance and applicability. In recent years, the research domain has been characterised by fierce competition for research funding from donor, business and industry partners, which is a mark of its increasingly applied or problem-solving orientation.

The development of appropriate programme models poses special challenges for comprehensives – beyond those that will be confronted by other merged or incorporated institutions – because two different types of educational provision are being brought together. In reality, however, the distinction between those two

types has already become blurred in many areas (but not in all), and that is one of the factors that must be taken into account in devising programme models. Although in theory the focus of university programmes is on general formative education with a theoretical orientation, and that of technikons is on technical education with a vocational orientation, that absolute division has become blurred, with both types of institutions offering a significant number of professional programmes and programmes with a strong career focus. Few programmes are devoid of either theoretical content or some skills orientation. What this implies is that there may be substantial areas of correspondence between different types of programmes that could form the basis for new programme configurations. This does not, however, mean the simple collapse of programmes into one another with subsequent loss of diversity.

For institutions merging to become comprehensives, there are three important questions to be addressed.

- How will programme diversity be maintained?
- At what levels is integration possible and desirable?
- Where is it possible to construct articulation pathways, and what form will they take?

For universities that are refocusing their mission, the challenge is somewhat different. University programmes are often driven from within, by developments within disciplinary and knowledge fields, and it is mainly professional programmes that have an external orientation (to the profession and its governing professional body/council). External relationships are likely to be underdeveloped in most other university programmes, but the formation of these relationships will be critical to the successful launching and running of technikon-type programmes. In these cases, institutions will have to engage in the simultaneous processes of developing programmes *and* a platform of external relationships with business, industry and community partners to inform curriculum development, to open up possibilities for co-operative and in-service learning, and to keep abreast of the particular skills requirements of the labour market.

For institutions that are becoming comprehensive universities as a consequence of mergers, the starting point will be the identification of areas of correspondence and synergy.

Finding Areas of Programme Correspondence

The areas in which levels of correspondence are most likely to be found are those that lie along the professional / career-focused axis of educational provision. These may be found in some of the following fields, and this list is by no means exhaustive:

- Agriculture and Horticultural Studies

- Architecture, Applied Arts and Design
- Commerce, Business and Management Sciences
- Computer Science and ICT
- Educational Studies and Teacher Training
- Engineering and Allied Disciplines
- Health Sciences, Human Movement Studies and Nursing
- Law, Para-legal and Security Studies
- Media Studies, Communication and Journalism
- Performing and Fine Arts
- Tourism Studies

Broad programme and qualification descriptions, however, are a poor guide to correspondence: levels of correspondence can only be determined by careful examination of curricular outcomes, contents, modes of assessment and pedagogy. There are three possible outcomes of this exercise: the identification of areas of high correspondence, areas of partial correspondence, and areas of little or no correspondence. Each of these will require a different programme solution. Before exploring these possibilities, there needs to be some discussion of general curricular issues and how these relate to the design of programmes in the context of current and future academic policy.

Academic Policy

Discussions are currently underway as part of the process of developing new academic policy that will provide a framework for the provision of all higher education programmes and qualifications for a single co-ordinated system. Until that policy is finalised, however, programmes continue to be governed by existing policy as established in the NATED Reports 116, 150 and 151. These policy documents are based on a notion of different institutional types and make clear distinctions between technikon and university programmes. University degree programmes are expected to give students a grounding in, and understanding of, the basic scientific principles underpinning their field of study, while technikon education focuses on the application of scientific principles in practice and the preparation of students for particular vocations and occupations. New academic policy is likely to abandon this rigid *institutional* division in response to the realities of current programme provision and focus instead on differentiated *programmes*. At this level the distinctions still have some validity and are most obviously manifest in the difference between programmes made up of a number of unit standards and those that have been registered on the NQF as whole qualifications.

Implicit in the distinction between whole qualifications and those made up of an accumulation of discrete segments, is a principle of curricular distinction based on different forms of knowledge and their acquisition. The assumption is that knowledge with a practical, work-related orientation which draws on multiple disciplines can be segmented into blocks that have an internal coherence, the

mastery of which equips students with real skills. Additional blocks may be added on, which enhance the array of skills in the student's 'portfolio', and with both vertical extension of complexity, and horizontal expansion.

The kind of knowledge that is primarily theoretical, abstract and conceptual (scientific knowledge that is usually discipline based) is not held to be divisible in the same way and depends rather on the sequential, vertical building of theoretical complexity over a number of years before any real coherence and mastery can be achieved.

Many professional and career-oriented programmes combine both types of knowledge and demand that students have some mastery of the fundamental concepts and theories of the cognate disciplines upon which their knowledge field draws, while directing theoretical understanding to its application in practical contexts. The demand for fairly complex levels of understanding makes it unusual, but not impossible, for such programmes to have lower level exit points.

These are important considerations when it comes to finding areas of correspondence between programmes, or developing articulation pathways between different types of programmes and qualifications, or determining the access routes to higher levels of study. It is almost impossible to conceive of curricula today that do not have some general education components, that do not impart some theoretical and conceptual learning, and that do not touch on the applications of knowledge. It is the relative balance of these components within particular programmes that determines the nature of programmes and the way they are classified. The appropriate balance will be a function of the knowledge field itself, its particular stage of development, and its orientation – whether inwards to the disciplinary fields which comprise it, or outwards to the context of practice and application.

Academic Programme Models

Ms Gibbon went on to say that the terms 'programme' and 'curriculum' are often used interchangeably, but programme design at this generic level refers to the broad shape of learning programmes that attempt, in this context, to bring applied / vocational courses into some sort of relationship with more theoretical courses in the same knowledge field. The following discussion of possible programme models, or models of combination, does not, therefore, go down to the level of the actual curriculum: the statements of intention and desired outcomes, curricular contents, and the modes of assessment and delivery that make up a course of study. In practice, however, an appropriate choice of programme design can only be made on the basis of close scrutiny and interrogation of the actual curricula that comprise courses.

Where programmes within the same knowledge field were found to have little in common, they could be offered as separate, stand alone programmes within the

same school or faculty. It might be possible, however, to build articulation pathways between them at different levels. Where higher levels of correspondence existed between programmes, a number of models for the partial integration of programmes could be explored.

The consecutive or extended track model

In this model, students enter at a lower level than is required for degree studies and follow a common curriculum with a more applied focus up to an exit point leading to a vocational qualification that is below the level of a degree. Students may then choose an extended part of the curriculum which would lead to the award of a degree. The programme would have to be designed in such a way that students would cover sufficient theoretical material in the extended track to justify the award of a degree in terms of complexity of learning. This model is similar to the 'Capstone option' developed at Southern Illinois University where first qualifications have a strongly applied bent but can be used as stepping stones to more concentrated theoretical studies leading to a degree. In effect, this is the design of the current technikon diploma and BTech.

The 'Y' or alternative track model

In this model, students enter at the same level and complete a common curriculum of shorter duration than in the extended model, after which they select a track that takes them in either a more applied or more theoretical direction. These terms are not used in an exclusive sense, but to indicate a different balance or proportion of applied to theoretical content. The applied track has a lower level exit point than the theoretical track in terms of complexity of learning, but could be equivalent in duration if more time is needed to build practical learning experiences into the curriculum. At the point where the programme splits into alternative tracks, it might be necessary to set specific achievement levels for acceptance into the degree track.

In the experience of the German *Gesamthochschulen*, the shorter, applied / vocational track attracted fewer students over time and more or less withered away. This would be an unwelcome outcome in the South African context as the intention is to strengthen and extend the provision of qualifications with an applied orientation while at the same time removing obstacles to students' progression into degree studies where they demonstrate the capacity to pursue them. It is also unlikely that either of these two programme models would attract students who already qualify for degree study.

The inverted 'Y' model

In this model, different entry requirements are set for parallel applied and theoretical tracks which then fuse into a common curriculum at a higher level. This model has many features in common with the extended track model, only in

this case it can be seen as an articulation route into an existing degree programme. The curriculum difficulty posed by this model is that it is not clear where students on the applied track would acquire the theoretical and conceptual tools needed for higher level study. Either the ladder curriculum leading up to entry into degree level studies would have to be sufficiently rigorous to provide those tools, or students seeking entry might be required to take extra courses and meet specific achievement levels. This model was avoided by the *Gesamthochschulen* because of the potential to perpetuate status differentiation by separating students at this early stage. It does, however, have the distinct advantage of enhancing access by offering different entry levels to programmes while still providing the route for progression into degree studies.

The shared stem model

This is a pragmatic option, with similar features to the 'Y' model, that focuses on rationalising some of the components of similar programmes without moving to a completely common curriculum at any level. In other words, students from an applied programme and students from a more theoretical programme might attend some courses in common where there is strong curriculum overlap. For the rest, the programmes are distinct and may have different entry and exit levels. The sharing of some curriculum components may also enhance articulation possibilities between the programmes.

Quality Assurance, Articulation and Transfer

The presentation ended by drawing attention to the importance of quality assurance, articulation and transfer mechanisms in comprehensive universities. One of the distinctive features of the comprehensive institutions will be the opportunities they offer students for successful progression, and for movement between the different tracks of programmes, or between different types of programme. In the interests of students and for the academic credibility of programmes, it is vital that the conditions for movement between programmes be considered very carefully and that students be equipped with those skills and levels of competency that will make progression possible. In this respect, the management and practice of quality assurance processes, the development of articulation pathways, and the transfer of credits, are intimately related.

At a minimum, the following factors should be taken into account when setting the conditions for articulation:

- An accurate assessment of the achieved levels of competency in the programme from which the student is transferring;
- An accurate comparison of curricular contents and outcomes between the two programmes;
- On the basis of the above, a calculation of which courses can be credited for transfer to the new programme, and at what level;

- On the basis of the above, an assessment of the level at which the student will enter the new programme;
- On the basis of the above, the identification of any additional 'catch-up' courses that the student may have to take to fill significant gaps before progression is possible.

This is a task that will require input from specialists within the knowledge field, approval from faculty boards and senate, the administration of agreements, and the transfer of credits from one programme to another. Institutions should consider what the best mechanism will be to handle this task. One possibility is that an articulation and transfer office is set up within the quality assurance unit of the institution to facilitate the evaluation of courses, course content, and student performance for transfer purposes.

Curriculum Issues for Comprehensive Institutions: Dr Rolf Stumpf, Vice Chancellor, University of Port Elizabeth

The Retreat from 'Comprehensiveness': Germany and Britain

Dr Stumpf began his presentation by returning to international experience and the insights he had acquired in the course of a visit to a number of German universities, undertaken in late 2003 along with other South African Vice Chancellors. It was quite clear, he argued, that Germany had fully returned to a binary system. What needed to be spelt out, however, were the reasons for the failure of the comprehensive university (*Gesamthochschule*) experiment.

In the course of their visit and their interaction with many people, not once were knowledge considerations advanced as a reason for failure. No one had seen it as impossible to bring together different kinds of knowledge. Instead, all the reasons given were practical and related to issues such as the difficulty of establishing common conditions of service and employment for staff coming from different educational sectors. But the perpetuation of status differentiation, which was a major contributor to failure, had deeper roots, and related to the refusal of university professors to recognise *fachhochschule* professors as their peers.

Another factor was that where the 'Y' programme model had been adopted, the shorter, more vocationally oriented leg had fallen away over time as more students entered the institutions with the full *Abitur* and opted for longer degree studies. This had produced inevitable academic drift away from vocational programmes and contributed to emulation upwards towards traditional university status, a move fuelled by both staff attitudes and student aspirations. Dr Stumpf related this to a parallel move in Britain, manifest in the granting of university status, since 1992, to the erstwhile polytechnics. This had, in effect, kicked away the connecting institution between the FE sector and the universities.

What he concluded was that comprehensive institutions were more likely to fail in strongly class-based societies than in others. The implication was that although South Africa is a young democracy, it suffers from fewer entrenched class practices and attitudes than some of the older democracies of the West and the comprehensive experiment might stand a greater chance of success under such conditions.

Academic Programme Models

Dr Stumpf went on to say that there had been no general consensus about a single programme model in Germany. While other comprehensive institutions followed the 'Y' model, Kassel developed the 'I' or extended track model. This has served them well in so far as it conforms to the model agreed to as part of the Bologna Accord that aims to harmonise the form of higher education qualifications in Europe to enable much greater student mobility within the EU.

In the South African context it also seemed impossible to choose a single programme model for all institutions, and it is likely that different institutions would adopt different approaches. Even within a single institution, different programme models might be chosen to suit the varying needs of faculties. He warned, however, that a proliferation of different programme models could be difficult to manage, and if the 'Y' model meant that all students would be brought in at a low entry level, it could result in students, with higher achievement in the school exit qualification, moving to other universities.

As an alternative approach, Dr Stumpf proposed a model that is not based directly on common knowledge fields, but rather on qualification types that might straddle a number of different knowledge fields. The three legs of this model would correspond to:

- Certificate and diploma programmes,
- Professionally oriented under-graduate degrees, and
- General undergraduate degrees.

Above these would be a set of postgraduate programmes. This approach would enable the maintenance of strong technikon and university cultures. For the Port Elizabeth context, this was important, as the move to a comprehensive university left the city, which was an important industrial hub, with no technikon. As a consequence it was vital to protect technikon programmes (the certificate and diploma leg) within the new institution.

Over time, he foresaw that the Nelson Mandela Metropolitan University would become a 'professional' university, with its strength concentrated in the professionally oriented leg.

His final comment was that much more work was required of those institutions that were merging to become comprehensive than in other mergers, and considerable additional resources would be needed, but no financial provision had been made for this in the Department of Education's merger guidelines.

The Mixing and Matching of Knowledge: Prof Joe Muller, School of Education, University of Cape Town, and Jeanne Gamble, Ph D candidate, UCT

Introduction

Prof Joe Muller introduced this topic by remarking on the fact that to some extent we are still operating in unknown territory. How do we move beyond this? The language that is currently available to us to talk about different kinds of knowledge is inadequate, undeveloped and requires conceptual refinement and elaboration. What sorts of distinctions can be made between technician and university programmes, or between the different forms of knowledge these terms are supposed to represent? And in making those distinctions, can we loosen the terms from the historically embedded interests that shape the current terrain?

Such distinctions, in turn, need to be tested against empirical data, and this is the focus of Jeanne Gamble's doctoral studies. Knowledge forms place strictures on what can be known, on what can be taught and learnt, and on the pedagogy through which knowledge is reproduced. Ms Gamble's exploration of how knowledge is transmitted in a craft learning context is one attempt to refine our understanding of knowledge and develop an appropriate language with which to talk about it.

Crafting Knowledge: Jeanne Gamble

A lifelong interest in crafts and the way in which people learn crafts had provided the impetus that shaped the topic of her doctoral studies, Ms Gamble explained. Of particular interest was the way in which, in technical and craft fields, what has come to be known as the 'community of practice' serves to de-centre the relationship between master and artisan. This stands in stark contrast to the relationship between teacher and taught in many formal academic contexts in other knowledge fields. What therefore became central questions for her were not only how knowledge was conveyed, transmitted or reproduced, but what form it took, what structure it had, and what language could be used to describe it.

She chose for the focus of her empirical study the field of cabinet making and described how she spent many hours observing and trying to understand what she was seeing. Cabinet making is formally taught, but that teaching, for the most part, takes the form of old-fashioned artisanal training. The only language available in the learning context was one related to practical skills, but it became

clear that this did not adequately encompass the full range of what was happening. For example, some apprentices appeared to have a complete mastery of certain skills, but for the master craftsman they would not qualify as artisans in the field. Mastery of the skills alone was not enough, but in the workshop environment there was only the language of skills, no language to describe the knowledge base that went beyond skills and made a qualified cabinet maker. What was the distinguishing factor? For Ms Gamble, this posed the problem of how to connect the theoretical to the empirical fields, when the theoretical was not articulated. How could one describe the structure of this kind of tacit knowledge in order to be able to talk about it within the same discursive frames as other kinds of formal knowledge?

This line of enquiry led her to the work of a number of scholars who had explored the division of knowledge between head and hand. In *The Chaos of Disciplines*, Abbott argues that knowledge structures break along this divide and then reconfigure themselves in more or less homologous forms. Other scholars posed the historical question of when knowledge could be seen to divide. Geometry had developed in the sixth century on the empirical ground of measurement, and then through a process of induction had arrived at general principles. On the other hand, mathematics, considered to be the purest form of abstract reasoning, worked on the basis of deduction from non-empirical reasoning to particular instances. Tilsel, an historian of science, traced the development of science in the West, looking particularly at the division between university scholars, the humanists, whose intellectual training was in abstract logic, and the so-called artisans, the medical doctors, map-makers, artillery designers and so on, who advanced knowledge through trial and error. These different knowledge pursuits, divided along the axis of head and hand, also strongly followed class divisions. Only when those class barriers weakened did the two come together, only then were inductive and deductive forms of reasoning combined.

Returning to the context of cabinet making, Ms Gamble concluded, after extended observation, that the qualified artisan was someone who had grasped the principle of the whole, the relationship between the parts and the whole, the principle of arrangement, whereas the apprentice who had only learnt skills could not operate in terms of this larger principle. It was the induced principle, however, that held the thing together, and that was where the unity of head and hand resided. Following Abbott, she went on to argue that although general and particular forms of knowledge are often held to be very different, they have homologous structures. Even in formal knowledge, the principle can often only be arrived at through procedure. Both forms of knowledge, in other words, contained principled and procedural kinds of knowledge. Teaching very often pulls them apart, and subjects are taught to general procedure or to general principle. In either case, however, the master or scientist holds the evaluative criteria against which the learner's grasp is assessed.

Finally, she argued that the best way of understanding the difference between particular and general forms of knowledge was through directionality: particular forms of knowledge worked primarily through procedure to arrive at principles, whereas general forms of knowledge moved in the opposite direction, from principles to procedure.

Conclusion

Joe Muller concluded the session by commenting that there are both similarities and differences in knowledge forms and it is important to acknowledge both. Unless this is done, discourse moves to an ideological level where it is then fought out between the proponents of strong integration of different kinds of knowledge and the defenders of binary division. What the presentation had suggested to him was that there are limits to what can be done with curriculum engineering. In relation to students, one had to bear in mind that it took a particular kind of 'prepared mind' to be able to recognise the principle in countless particular examples or cases. In relation to staff, it could be assumed that they would come with different sorts of intellectual 'framing' and would therefore be inclined to teach from different perspectives. At a more general level, it also appeared that external funding and policy environments would favour certain things above others.

Response: Dr Michael Young, Emeritus Professor of Education, Lifelong Education and International Development, Institute of Education, University of London

Dr Young initially responded to the presentations by saying that there were two things that struck him. One was that he considered this kind of curriculum debate to be very valuable and that there was nothing comparable to it in the UK. The second was that there was far less direct intervention in the higher education sector from the state in the UK; control was generally exercised through money and resource allocation, and that could account for the fact that these sorts of issues did not have to be confronted in quite the same way.

He went on to say that his response took the form of five points.

1. Language

Reiterating Joe Muller's point, he argued that while there was a need to find a language that goes beyond ideology, it was not easy to do so. Ideology is deeply embedded in language and even in Jeanne Gamble's attempt to move away from narrowly evaluative approaches, the terms that were used – principles, procedures, vertical and horizontal – were loaded. There were also other ways in which language became problematic in this context. There was the constant danger that the language of social science could become a

private language and there was a need to guard against that. In particular, there was no straightforward relationship between the language of theory and the practical issues of merging institutions.

2. Relationship between FE and HE

It seemed that the criteria or objectives for comprehensive universities were identical to those one might construct for FET colleges, particularly in the goals of increased access and responsiveness to labour market and economic needs. This gave rise to all sorts of anxieties about threats to academic standards and about academic drift which often translated into the emergence of both stronger and weaker forms of academic programmes. There is a danger that the discourse becomes dominated by human resource needs, by economic rather than educational goals.

3. The Finnish Polytechnics

The six institutions designated to become comprehensive were so different that there was clearly no model to fit all circumstances. However, in terms of the goal of extending and strengthening vocational education, it was worth looking in more detail at the Finnish polytechnics. Many of these institutions had come into being through the upgrading of existing vocational colleges and particularly the merging of a number of mono-faculty vocational colleges. The success of these polytechnics could be attributed to two strategies: one was to make significant investment in their technological infrastructure, and the other was to strengthen the general, technological and work placement components of the curriculum and lengthen the programmes.

4. Institutional Change

Dr Young argued that it is important to hold on to the difference between short and long term goals and consequences. Change is actually slow and incremental, and higher education institutions in particular change slowly.

5. Professional university

The final point related to Dr Stumpf's idea that the long term aspiration of the comprehensive university in Port Elizabeth should be to become a professional university. Was it clear, however, what the term 'professional' signified?

Discussion

Discussion was brief due to a shortage of time, but a number of issues were debated later via e-mail correspondence, particularly in response to subsequent

papers written by Michael Young (see below). Points raised in the course of the seminar included the following:

Access: It was time the access bubble was pricked – institutions were already struggling with far too many students who were not performing adequately in academic terms, many of whom did not meet university entry requirements but had been inherited from incorporated campuses. Resolving this situation was fraught with political difficulties and these students placed a huge burden on staff and institutions. Making increased access a goal for comprehensive universities would merely exacerbate this situation without giving them any real chance of success. Trish Gibbon responded to this by arguing that the policy intention was not to promote access in general, but to enhance access to technikon-type programmes with their lower entry requirements, particularly in regions where these had not previously been available.

FET / HE collaboration: As part of a strategy for resolving the access problems raised in the previous point, it was proposed that there should be a review of articulation possibilities between FET colleges and higher education. FET colleges were probably better placed to give under-prepared students the foundation they needed for progression into higher education.

Articulation: Was it realistic to put a lot of effort into articulation, particularly from diploma into degree programmes, when the labour market needed the technological skills of diploma graduates? Should we be pushing students in this way? The response to this was that while a primary goal was to strengthen diploma programmes, it was also true that school leaving qualifications were poor indicators of potential and that students who showed real ability should not be blocked from proceeding to, or transferring to, degree studies.

University disciplines: What was the role of university disciplines in the context of a comprehensive institution? It was argued that those disciplines that were retained in a comprehensive university had to be centres of academic excellence in their own right, or centres of service excellence, or provide service courses to other programmes.

The Separate Colleges Model: It was argued that this model was not affordable as each comprehensive would be funded as a single institution. This model could probably function as a transitional arrangement, but it was important to bear in mind the German experience, where so-called transitional structures had ossified and entrenched interests had meant that they had continued in existence for decades. The lesson was to move as quickly as possible to new structures appropriate to the new institution.

Performance Indicators: Given the differentiation between institutions would it be possible to develop a single set of performance indicators for the whole sector? It was suggested that this would be possible but would have to include weighting

through norms to cater for the various types of institution comprising the landscape.

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2. TWO PAPERS BY MICHAEL YOUNG

PAPER 1: COMPREHENSIVE UNIVERSITIES FOR SOUTH AFRICA: SOME REFLECTIONS FROM A EUROPEAN PERSPECTIVE

Nico Cloete introduced the seminar by saying that, at least as far as the six designated universities and technikons were concerned, the idea of a comprehensive university was official policy and therefore not itself open to debate. The seminar was therefore concerned with the many difficult questions about what the idea might mean and how it might be applicable in the particular context of South Africa. I would like to offer some brief historical and comparative reflections on how the idea of 'comprehensiveness' in education has fared in other parts of the world.

As Trish Gibbon's paper showed, only in a small number of cases in Germany in the 1970s could it be said that the idea of a comprehensive university had been put into practice. In England while many universities would associate themselves with the goals of the comprehensive university, the term itself, as far as I am aware, is never used; familiar euphemisms are the 1992 or 'modern' universities to distinguish them from those established as universities up to the 1960s and broadly refer to universities with (a) poor research records across the whole university, (b) smaller post graduate schools, (c) fewer staff with doctorates and (d) lower entry requirements for students. The South African situation is complicated by the fact that some technikons and former technikons would score higher on these criteria than some universities.

While rarely applied to higher education in Europe, the idea of 'comprehensiveness' has been widely applied to secondary education by social democratic governments as a way of minimising the class bias of early selection. Although secondary and higher education have different functions and are different in many qualitative ways, there may be lessons from the European experience of comprehensivisation for those involved in South Africa's comprehensive universities.

Sweden is probably the most successful example of a country in which the idea of comprehensive secondary education has been developed where all the students in a cohort attend the same school. From the mid 1980s this idea was extended to include post compulsory education (for 16-19 year olds or grades 10-12) as well as compulsory education (students up to 16). However in Sweden the upper secondary curriculum is comprehensive in only limited ways – there is a common core. Upper secondary schools are organised in terms of 15 programmes or pathways, only two of which (natural sciences and humanities) provide a guaranteed route to higher education. It is possible for those on other 'more vocational' pathways to progress to HE, but only if they take certain specific courses.

In England comprehensive schools were developed locally from the 1950s; by the early 1990s over 80% of state secondary schools were comprehensive. However, very little progress was made in developing a **comprehensive curriculum**, particularly beyond 16. In practice most comprehensive schools adopted some version of a three track (academic/general, technical/vocational and remedial) approach to curriculum; the main gain was the flexibility and relative ease of transfer between the tracks within the same school as well as the lack of stigma associated with separate schools. The relative success of comprehensive schools reflect their origins (some combined selective and non-selective schools, others developed from non selective schools) and their location. In deprived areas of inner cities, comprehensive schools have become little better than the non-selective secondary modern schools which they replaced.

The reasons that a divided curriculum persisted within comprehensive organisational structures remain complex and controversial and do not differ markedly from country to country. They relate partly to the great differences in attainment that display themselves at every age and the close correlation between attainment and social class. However the social class aspect tends to be glossed over as a constraint that most governments would be neither willing nor able to address. Resistance to a comprehensive curriculum also relates to the steady expansion of success within the traditional academic curriculum; in England A levels which were designed in 1951 for 3% of each cohort are now achieved by nearly 40% and far better figures are found in a number of other European countries. It also relates to the subject specialisation of most secondary teachers and the very difficult pedagogic and curriculum issues they would have to face as well as considerable lack of clarity or agreement as to what a comprehensive curriculum might look like. There have also been powerful political and parental pressures against any significant change to the academic secondary curriculum and the high-stakes examination associated with it. .

The history of curriculum reform since the 1960s is strewn with failed attempts to 'integrate' knowledge across fields and across the school knowledge/everyday knowledge divide; most such developments have been associated with achieving greater equality. However it seems inescapable that we are dealing with the complex interplay of epistemological and social constraints which at least in the UK, those supporting a comprehensive secondary curriculum have been reluctant to face. It follows that a comprehensive curriculum is unlikely to be, at least on its own, the best strategy for overcoming persistent inequalities.

The implications of this argument is that while **comprehensive re-organisation**, whether it refers to schools, further (or post compulsory) education or HE, can offer opportunities for widening participation and increasing access, the much more radical idea of a comprehensive curriculum, does not seem viable, at least in the short term. A version of it was tried by the Maoist Red Guards in China and dropped by Deng, Mao's successor after 1976. The Chinese are still trying to

make up for the almost total destruction of their research capacity and higher education in the period prior to 1976.

Two things follow that have been said many times before but seem to need to be said again. First it does seem likely that if the countries of northern Europe with their strong democratic cultures and relatively low levels of inequality have not been able to adopt a comprehensive curriculum for the 11-19 age groups, its chances of success in South Africa (at FET or HE levels) remain small. Secondly the countries that have been most successful in reducing educational divisions between tracks, social classes etc, have adopted a very different strategy which I will call **dual enhancement**.

This strategy starts by accepting (a) broad distinctions between types of knowledge that are expressed in academic/vocational divisions, (b) that the major policy goals for both FET and HE are **modernising** the existing academic curriculum of university degrees and matric and **upgrading** the intellectual content of the vocational alternatives. While most countries adopting a dual enhancement approach such as France and Germany have given more emphasis to upgrading the vocational than modernising the academic, it would seem that in South Africa both are equally important.

Dual enhancement needs two **separate** but related curriculum debates and strategies. The first starts from the global economic changes that are taking place and the importance of young people acquiring new types of knowledge that cut across traditional boundaries between fields and between theory and its application. Such a strategy would need to accept that while subjects in the FET Band and the disciplines associated with universities have proved themselves as forms of social organisation for acquiring knowledge (and in research for producing new knowledge) they need regular reform and debate to stop them being, as they have in the past, mere legitimators of the status quo.

The second debate and strategy associated with **dual enhancement** has to address the future of vocational education and its highly problematic relationship with pedagogies and curricula for those who have either dropped out of schooling or failed. There has been a dangerous assumption in the UK as in many other countries that the two problems of modernising the vocational curriculum and overcoming low attainment can be dealt with in the same way. This has invariably been to the detriment of both – an undervaluing of vocational education as something for those assumed to lack intellectual abilities and a failure to recognise the specialist expertise needed to teach slow learners and others with low attainments.

The proposed 'comprehensive' universities need to address these two issues; however in neither case can they do it alone. Reforming the old disciplines, creating new disciplines, and exploring the pedagogic implications of new cross-disciplinary forms of knowledge are likely to require collaboration with disciplinary

specialists across the HE band. Developing new approaches to the vocational curriculum as well as new types of access and progression pedagogy will inevitably involve collaboration between institutions in the FET and HE bands.

The Finnish polytechnics are a good example of the second strategy which might be called **vocational enhancement**. Finland began with a number of explicit criteria for all polytechnics:

- Articulation of an institutional mission that relates to the developmental needs of the region/area in which the polytechnic is based;
- Increased theoretical content through extended study time (an additional year+);
- A requirement for work experience which is assessed in a portfolio in which students are required to 'apply' aspects of their in-college knowledge to the specific problems of their workplace site;
- Extending the integral role of IT across all fields including the social sciences and humanities;
- Maintaining a common core curriculum to maximise ease of transfer between occupational specialisms.

In early 1990s some of us argued that the only way to improve opportunities for students on the vocational side of the academic divide was to abolish the distinction and create a unified system. Ironically a version of this approach was adopted by the Conservative government of the time when they re-labelled polytechnics and other institutes of higher education as universities. As a result a new and increasingly stratified system emerged, in which the weaker of the ex-polytechnics have been forced to abandon their programmes of general education as not financially viable. Fourteen years later I think that the argument for unification or integration was wrong at least in the short term. Attempting unification (or integrating across a set of merged institutions) when one element (the vocational) that was being 'integrated' was so weak, was doomed to failure; it led to the emergence of weak academic programmes and even weaker forms of vocational programme. The focus needs to be on increasing the required proportion of general education and strengthening the theoretical component of the vocational specialist courses in all vocational programmes. The integrative vision of a 'comprehensive university' can only be realised on the basis of strong vocational programmes with high intellectual content.

What are the possible implications of this analysis for Rolf Stumpf's model that distinguishes three pathways, general/formative, professional/career oriented and certificate/ diploma? Obviously a general analysis cannot speak directly to a model that has arisen from a particular institutional context. Nevertheless some implications can be suggested. First, (see my paper on the FET/HE interface), my argument would be that the third certificate/diploma pathway is not appropriate (except as an emergency transitional measure) for the university as currently constructed. It should be the responsibility of the local FET college(s) in

partnership with the university or vertically integrated into it. Second the strategy of ***dual enhancement*** should focus on the two other pathways (as suggested above). The long term assumption (as indicated by Rolf Stumpf at the seminar) would be that the professional/formative and general formative routes would gradually converge and be differentiated more by intellectual field than by type of programme. In essence both pathways are formative and both can lead to graduate studies and research albeit in somewhat different ways. Both therefore need distinctive forms of curriculum enhancement.

The curriculum problems of what such programmes might involve and how far general education needs to change from the old liberal tradition are not as high on the agenda of governments or research funders as they should be.

**PAPER 2:
PROMOTING ACCESS AND PROGRESSION: THE SCOPE FOR
COLLABORATION BETWEEN HE AND FET. A NOTE**

South African Higher education policy for comprehensive universities gives priority to access and supports:

- Developing a wider range of programmes in areas where they were previously not available, and
- Developing new types of programmes with lower entrance requirements.

At the same time it is apparent that there are already many 'access' students already registered in universities and technikons, in the sense that they lack standard admission requirements and in most cases are struggling with their studies. It is not immediately clear that universities and technikons should devote their scarce resources of specialist staff to developing lower level courses for such students, except as an emergency measure.

The issue of access and participation is also addressed in the new policies for FET colleges. For example, it is proposed that they should:

- Diversify their curriculum
- Develop partnerships
- And facilitate access to higher education

Although they address essentially the same problem, these policies appear to have been developed relatively independently of each other rather than within a broader policy of broadening access. I would suggest that it might be useful to explore the implications of a broader policy that saw FET and HE as elements of a broader system of post compulsory education (and training). Some of the questions raised by such a broader perspective are listed below:

- In what sense are these policy goals that focus on FET and HE in practice interdependent?
- Does it make sense in terms of the division of scarce labour to have two separate sectors dealing separately with the same problem?
- Are there some contradictions and confusions within the policies that need exploring? For example:
 - Encouraging colleges to 'develop up' in the sense of focusing on progression to HE at the same time as they are being expected to cut back on existing HE level courses;
 - If universities, especially the new 'comprehensive universities' are being encouraged to 'develop down', could this not take students away from the FET colleges?
- What problems and possible benefits might follow if FET and HE institutions are encouraged to develop forms of **vertical integration** (VI)?

- Is it useful to distinguish between types of vertical integration? For example, **weak** forms of VI based on locally negotiated partnerships in which the FET and HE institutions retained their separate identities might be distinguished from **strong** forms of VI in which HET and FET institutions come together to form a type of 'comprehensive' institution of further and higher education. Neither type precludes the possibility of more than one institution from each band being involved.
- What are the implications of such developments for what in Europe is often known as the **royal road** to university (via good grades in matric)?
- Could a strong integration strategy be restricted to HE and FET colleges, or might it include schools?
- If progression to HE is one of the major goals for institutions in the FET Band, what are the implications for:
 - the differentiation between schools and colleges;
 - the possibility of 'dual qualifications' – a term used in Europe for routes that are both employment and HE oriented;
 - the future of the vocational role of colleges;
 - the status and success of programmes in the FET band that are not oriented directly to progression to HE?
- What might the incentives and disincentives be for HE and FET institutions (and other stakeholders) developing more/less integrated approaches to access and progression?
- How far is the separate policy on access shaped by (a) the separation of the FET and HE bands organisationally within the DOE, and (b) the separate roles of the DOE and DOL in the field of vocational education, (c) clear conceptual differences between *further* and *higher* education, (d) status differences between FET and HE which either lead far too many people to opt for HE or mask the importance of the specialist knowledge required for developing pedagogies and curricula for students with low levels of school attainment.

One possible implication of the last point is that universities are encouraged not to develop 'access' courses, but professional development programmes for upgrading FET college teachers. Such a development could be an element of either a weak or a strong model of vertical integration. It is unlikely to be developed if the two bands continue to operate independently in a field which is so clearly an interest to both.

3. SUBSEQUENT DEBATE VIA E-MAIL

Trish Gibbon:

I've skimmed Michael's report very quickly - he's very interesting on the European experience. On the South African situation, however, he works from three mistaken assumptions. First, the aim is not to create an integrated comprehensive curriculum - that is nowhere ever stated as a goal - but merely to integrate programmes where there is already strong overlap or correspondence. In fact I have been at pains to say to people that they should not confuse the concepts 'comprehensive' and 'integrated'. Comprehensive refers rather to the range of diverse programmes that is offered, from vocational to academic, not to integration of programmes. But obviously if a diploma in business management is being offered at the technikon and a degree in business management at the university, they would need to explore the possibilities for some level of integration. That's where the programme models come in.

The second problem is that if all the certificate and diploma students were given to the FET colleges there would no technikon students anyway. It might be possible to say that FE should offer the certificates, but 90% of technikon students are registered for diplomas. Get rid of them, and all you have is a university. The third confusion is in the assumption that new lower entry programmes are to be created. That is only true for the universities that are refocusing their mission (Venda, Zululand and Transkei). The intention is to keep the already lower entry requirements of existing technikon programmes in the new comprehensives and make those available in places where they haven't been offered before. The emphasis on this arises out of the fear that there will be a drift to university entry requirements which will block the access that students enjoy at present. There is no new access route being created here, merely protection of the old and its extension into some regions that haven't offered technikon programmes previously.

Nico Cloete:

Well at least I was right in predicting that we will not have a seamless set of notes on the comprehensives – to me it shows the complexity of the exercise. For my three pence, you find Michael's comments on Europe interesting but then dismiss them because you have already taken a policy decision going for comprehensives and you do not apply his lessons - that I think is the challenge of Michael's piece. Secondly, you overstate Michael's comment on diplomas, but the diplomas and certificates issue will have to be worked out more carefully than we thought – which is why I suspect Rolf made it a third leg. Thirdly, you slip and slide around the access issue, which is one of your main potential gains for a comprehensive, but I think it is a long way from being as clear as you make it out to be - if you don't allow slippage at the bottom, then, as in Germany, it won't really promote access – that's the catch. Distinguishing between 'comprehensive' and 'integration' is the centre piece of our debate and Michael is not simple minded about it at all. The subtext I read from your paper and your response is

the familiar South African particularism, "Europe is interesting, but we are different" – after all we have made a policy decision to make something work that failed in Europe - and not because we made it from an informed position, but because we had not even read anything about it before we made the policy. But we are learning from Tony Blair about developing a post hoc discourse (we always copy their bad habits and ignore their good lessons) - but even so, I think we should take the lessons from Michael's piece more seriously than you did in your response.

Trish Gibbon:

Yes, the issues are complex, and no, I do not simply dismiss Michael's comments. I think they are very valuable for the curriculum problems that we were beginning to address, but it's not possible to enter into a debate where some misunderstandings simply confuse the issues.

The access issue is not something I have any slippage about. Are you suggesting that the comprehensives be subject to the kind of access experimentation of unhappy UWC experience? It would be a complete disaster, as it was for UWC, not a potential gain. If I read the policy intentions correctly, then it is to extend access to technikon programmes (with their lower than university entry requirements) in regions where they have not previously been available, and to provide access to a wider range of programmes where technikons and universities are merging. There is nothing about softening or lowering existing entry requirements for these programmes. Michael's solution is the right one - nurture relationships with schools and FET colleges to produce the students who can meet the varied entry requirements of current technikon and university programmes. Rolf's current problem with the Vista students is a problem created by past Vista practices, not by the policy on comprehensives. It seems that throughout the country Vista accepted students who do not meet standard entry requirements - it would be interesting to know how other institutions that have had to incorporate Vista campuses have dealt with those students.

Michael Young:

Either I have not been clear or Trish misunderstands me or she is confusing policy debates and analytical debates. I think the latter but I will go back to my paper as well. Point 1 – I was stating that it is worth problematising what 'comprehensive' means here. Point 2 – The issue needs to be seen historically – our polytechnics used to take low level students but gradually handed them over to FE colleges – a process that the old sociologist used to call normative and cognitive upgrading – provided the FET colleges are properly resourced, that is a positive development and anyway your technikons are to be called Universities of Technology (in the Nordic countries technical universities are the most prestigious like MIT and CALTech, and the new Indian institutes of technology!!) Point 3 – this is a factual point but relates to Point 2 – The new universities should not be expected to go on doing non-university activities – that was

apartheid surely. There is a tendency for some of our 'new' universities to do this so it is not just a SA problem.

Nico Cloete:

In Michael's reply, I think he again raises the point of the FET link, something neither Trish nor the Department mentions as far as I am aware, and this is trying to strengthen HE policy that systematically excludes or ignores FET. The pressure for lower end students is already on Rolf. I read it as a point that Michael makes to warn us about in his notes, I don't see him as attributing them to policy on comprehensives

Trish Gibbon:

I'm beginning to realise that the real reason why Michael and I appear to be talking at cross purposes lies in different notions of the technikons and their mission. What has alerted me to this is his following comment:

"The new universities should not be expected to go on doing non-university activities – that was apartheid surely."

But they are expected to do this. The names may have changed but there is no way that they are now expected to drop all their lower than degree level qualifications and start emulating MIT and CALTech. They remain far more akin to the German fachhochschulen than to the European universities of technology. To move them from this mission would indeed be extremely radical and I have nowhere seen that even contemplated. Quite the reverse is true - the anxiety is that they may want to emulate upwards but many do not have the capacity to do so and would be doing their students and the economy a disservice if they tried.

Michael Young:

My paper was not intended as a direct response to Trish's paper but as a way of extending the debate. The even shorter piece on access arose out of a conversation with Rolf and my comments at the seminar. Obviously both come from limited knowledge of the South African situation, especially HE.

On the comprehensive issue I wanted to go beyond the policy frame a bit to think about why the term was being used and largely restricted to organisational and not curricula issues. This was the same in Europe with the kind of consequences that I describe.

On the access FET/HET issue, there are historical parallels – our polytechnics like your technikons grew out of technical colleges and for many years were relatively 'comprehensive' in access terms. However they progressively gave up their lower level courses which were taken on by the FE colleges and this was encouraged by the funding mechanism. I don't know how far this form of specialisation / differentiation makes sense in South Africa, though it is worth exploring provided the FET colleges are properly supported.

I do think that the ultra-weak universities are a unique apartheid legacy which probably need unique solutions as it seems that they cannot be closed down. Perhaps they could be turned into teacher training colleges, given that most of those have been closed!

Trish Gibbon:

I have been extremely cautious, even conservative, about the possibilities for integrating curricula because I think there is enormous potential to damage or do real harm to an already fairly fragile knowledge base in South Africa. And in that respect, there seems to be strong consensus that the three year diploma, for which most technikon students are enrolled, is a much needed qualification for the current labour market. So the intention is to strengthen those vocational / career-oriented fields that have traditionally been the domain of the technikons and there is a real fear that the upward emulating aspirations of the technikons will translate into academic drift in the comprehensive universities. This is why I see a marked tension emerging between the need to create a single, cohesive institutional and organisational identity in these institutions, and simultaneously maintain programme diversity. Allowing the diploma leg of the new comprehensive institution to wither away in favour of developing strong university professional programmes will defeat a major policy objective and close access to highly marketable, much needed vocational qualifications that are offered at a level significantly higher than courses at the FET colleges but have entry requirements that are lower than those for university programmes.

What interests me most about Michael's paper is the suggestion about a dual enhancement strategy. On the university side there has already been considerable experimentation in that regard with very mixed outcomes. Some of those experiments are described in a book edited by Nico and Piet Naude that was published last year. It's called 'A Tale of Three Countries - Social Sciences Curriculum Transformations in Southern Africa'. The South African examples are all from Rolf's institution.

On the technikon side, Michael raises a very important issue in talking about the academic enhancement of vocational programmes. It's been a huge concern in the States, but again was not part of the Working Group's objectives or the Department's. I can see that it could raise the ire of the technikons if they don't think there's anything lacking in the curricula they currently offer – and some aren't bad. I tried to raise the issue in a very minor key in the conclusion to my paper.

My hope is that in the comprehensive universities, the closer alignment of some technikon and university programmes will enable that kind of enhancement but it's an issue that needs to be addressed more generally.

Nico Cloete:

A summary paper like Trish's could, under certain circumstances, only be useful for policy if it identified a best practise to be copied - in this case there is not one. Its main use is thus ideological; different positions can borrow from the same summary to support their own position, or oppose another position. And I put a month's salary on that happening when this paper becomes public - the argument will be 'in our circumstances', but actually it will be according to their ideology / interests. The alternative is to have a theory of organisational change, or a theory of curriculum / knowledge, and that theory guides you.

Trish Gibbon:

Well, that certainly puts me in my place and clarifies a lot. I can't help saying, however, that the whole field of educational studies is notorious for not having any real theories, only hypotheses, which are themselves ideologically driven, but get passed off by educational 'experts' as theories. And Joe conceded that there was far too little empirical work done for us to really know how knowledge works.

Rolf Stumpf:

In Cape Town I did point out that in PE we will not have a 'technikon' anymore although we are an industrial hub. We, in PE, desperately need the vocationally directed certificates and diplomas which are currently offered by the PE Technikon and Trish is quite correct – they would have continued to be offered by the PE Univ of Technology were we not to merge. The new comprehensive NMMU has no choice – whether anyone feels that these belong to a university or not is in my view neither here nor there. The only question is whether this means that the NMMU must actually deliver these learning programmes or whether we could get the PE College (an FET college) to do the one and two year programmes and the NMMU certificates them, and the NMMU only does three year diplomas? We need people who do a two year programme in Office Technology - whether PE College can deliver the goods under the NMMU's academic oversight or not is for me the question. Will that qualification have the same currency as it has at present if it is offered by the PE College under some partnership model?

Nico Cloete:

Rolf, perhaps your three legs are still a useful practical guide, because you clearly have a double boundary problem – downwards, the technikon / FET college divide that is increasingly blurring, and then upwards, the technikon / university academic drift. The failure of the seminar, and Trish's paper, is that I don't think we have really helped you to sort this out with regard to organisational restructuring, nor regarding curriculum restructuring, (and these two seem increasingly linked). The eloquent reflection on vocational knowledge helps you neither with the downward nor the upward problem - if it does then the erudite presenters did not tell us how. I think Michael's notes, which he did not tell us much about in the seminar, are really important, and perhaps we need to look more closely at the implications of the strengthening of the vocational, which is

implicit in your comments on the discussion. Perhaps the real discussion is just starting

Trish Gibbon:

I have to say that large chunks of my paper are devoted to addressing the vocational / academic boundary at the level of organisational form and programme model and the paper stresses the very close relationship between the two. So let's not reinvent the wheel or pretend there has been complete silence on these matters. The paper does not, however, come up with any easy solutions, because there aren't any, and it does demand that, as in Rolf's case, institution's work with various options and mould their own solutions. What the seminar failed to produce, and Nico is quite right about this, is any real advance on the principles that should guide the finding of those solutions, that should guide curriculum structuring, beyond the general ones articulated in the paper. But if I understand Joe correctly, this is because we still don't know enough about where the differences and similarities lie between knowledges that we have conventionally labelled in this way, and the great value of Jeanne's piece was that she was exactly trying to tease out some of that. But as Joe remarked, the empirical work in this area is limited, and the language undeveloped. Where the language has been powerfully developed is on the ideological discursive terrain in relation to a set of social and political values as manifest, for example, in the contributions to the 'Three Countries' book.

I like Nico's use of the term 'boundaries' - it's not new in this context but it allows for ideas of both maintenance and transgression, for loosening and firming, and can be used of both institutional / organisational forms and knowledge domains. My paper does not address the vertical boundary between FET and HE, but as both Rolf and Michael suggest this could become far more permeable than it is at present.

I suspect, however, that the horizontal (and to some extent vertical) vocational / academic boundary between so-called technician and university programmes is a much tougher nut to crack. I had an extensive discussion with two of Rolf's staff members this week, and we thought that the shared stem model looked to offer interesting possibilities for building bridges between Rolf's diploma leg and professional / career-oriented degree leg, especially if articulation pathways could be built in. But the principles to guide bringing different kinds of programmes into relationship with one another are still missing. That's where we need to extend the discussion.

**Report by:
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March 2004**

4. PLAYING FAST AND LOOSE WITH KNOWLEDGE BOUNDARIES – JOE MULLER & NICO CLOETE

The debate about the organisation of the curriculum within a comprehensive institution must also be located within the broader context of the restructuring of the higher education landscape. According to the National Plan for Higher Education (2001) considerable drift has occurred across the binary divide:

“... the programme distinction between technikons and universities has been eroded in line with the White Paper’s suggestion of a ‘loosening of boundaries’ between institutional types .. [which] has resulted a in a slow, but sure, move towards uniformity, ...” (pp56-57). To restrict this drift, which the Minister regards as undesirable, the NPHE (2001) declares that, at least for the next five years, the boundaries will not be loosened, but maintained by the Ministry. A number of recent moves, however, seem to undermine this declared intention, the most dramatic of which is the abolition of differentiation through institutional types. This means that the policy tool to prevent drift is the intention by the national department to select and approve academic programmes and qualifications through the new funding and planning system – a brave rediscovery of central planning almost two decades after Eastern Europe abandoned it.

By advancing a rather ‘loose’ notion of a ‘comprehensive’¹ institution, the Minister has created a situation where both institutional and knowledge boundaries become blurred. In addition, the Minister has granted technikons the right to call themselves ‘universities of technology’, and it seems that imminent new academic policy is likely to abolish the distinctive nomenclature of BTech, MTech and DTech for the degrees of former technikons. The cumulative effect, once again, will be a story of ‘unintended consequences’.²

If this were merely the abandonment of an arbitrarily differentiating nomenclature, the consequences would not be dire. ‘Drift’ could then be understood as the inevitable transgression of artificial barriers between essentially similar knowledge forms. But the old terms ‘technikon’ and ‘university’ were used in the past, in an admittedly crude and oversimplifying way, to signify some essential *differences* between the knowledge forms and pedagogy associated with these institutional types. The adoption of an homogenising discourse, which suggests that different knowledge types can be unproblematically integrated, is likely to produce deep confusion amongst staff and students.

It is useful to spell out some of the encoded differences that will create obstacles to full integration in the new comprehensives. These differences fall into three categories:

¹ See the report by Van Der Heyde on the meaninglessness of the term:

<http://www.chet.org.za/papers/heydefinal.pdf>

² While all policy has unintended consequences, some consequences can be anticipated if sufficient attention is paid to relevant policy literature, such as the literature on comprehensives reviewed by Rolf Stumpf and Trish Gibbon in the preceding section of this report.

1. Differences in **knowledge structure** and the resultant requisite **pedagogic form**. Knowledges differ as to their tacitness and discursiveness. Broadly, the more technical-vocational the knowledge, the more tacit it is likely to be. Tacit knowledges require forms of pedagogical induction that favour apprenticeship, demonstration, different forms of assessment, and different forms of display of mastery to those required by traditional university knowledges which tend towards the discursive and thus favour traditional lecture and tutorial forms of induction, examinations, and discursive forms of display of mastery. It is hard to do equal justice to both ends of the spectrum in the same organisational space: one form is likely to assert its dominance at the expense of the other.
2. Differences in student **pedagogic identities** and their associated practices. The different knowledge forms referred to above specialise pedagogic identities in quite different ways. For example, the more discursive knowledges usually aim to induct students into general principles, even when the pedagogy is inductive, that is, via particular examples and cases. The more tacit knowledges predispose students into a different understanding of the relation between particular examples and the general case. Putting students predisposed in one way into a class together with students predisposed in another creates cross purposes and confusion, and ultimately, disappointment (see M Breier's PhD). Again, inappropriate integration will tend to create a dominant pedagogic form in the classroom which will inevitably advantage some students (because of their prior predisposition into that form of pedagogic discourse) and disadvantage others because their form of prior induction has predisposed and prepared their cognitive expectations differently.
3. Differences in **staff identities** and their associated **academic cultures**. Because of the different knowledge forms they practice and teach, academic staff are likely to have had their own academic identities differently specialised. Their intellectual and professional expectations will consequently differ. Academics in tacit disciplines tend to produce more and research less, and their students tend to pursue postgraduate study to a lesser extent than do adherents of the discursive disciplines. Expectations for remuneration, reward and promotion will consequently differ. It will be very difficult to respect these in a coherent and equitable manner within the unified financial and management accounting system of a single institution. Once again, it is likely that one culture will become dominant at the expense of the other.

An undifferentiated policy of 'comprehensiveness' thus runs the risk of creating prime conditions for a drift to the dominant academic practice, which will undoubtedly be towards the discursive disciplines and traditional university culture. The risk here is that the integrity of the technical vocational disciplines will be not so much impugned as damaged, and the quality of

instruction as well as resultant competence and mastery of the students may suffer. An innovation region without a robust and integral technical vocational educational sector will also consequently suffer. It may be argued that each institution will be free to pursue differentiation as it sees fit, but that will be to reckon without the coercive ethos of strong integration, which appears to be the ruling ideology of the Department of Education and permeates the expectations that weigh upon the institutions. This ideology is regularly repeated by the Minister, for example here speaking at the launch of the University of KwaZulu-Natal's 'corporate image' in March 2004:

*'The successful development of a comprehensive institution must entail the **integration in the real sense** of technikon and university-type programmes.'* (Emphasis added.)

Lest the readers of this piece of news were unclear as to what 'the real sense' was, the reporter helpfully continued:

'This is at the heart of the age-old debate down the centuries about the nature of knowledge, in particular, the relationship between theory and practice, between hand and brain and between basic and applied knowledge.' (Quoted in the *Star*, 25 March 2004.)

Not surprisingly, these unproblematised views of integration appear to take no cognisance of the more carefully differentiated position and cautionary notes sounded by Trish Gibbon in the paper commissioned by the Department itself. With the Ministry's publicly articulated view of integration bearing down upon them, it will take a brave institutional leader to insist on the necessary differentiation needed to protect the integrity of vocational and technical education at the new comprehensives. It may be predicted that the majority, seeking the usual grace and favour, will implement relatively undifferentiated versions of comprehensiveness, and we will see a form of academic drift that will be not so much regression to the mean, as defaulting to the mediocre middle – or in school jargon, 'dumbing down' the curriculum to the disadvantage of both technical-vocational and discursive knowledge.

It is not difficult to foresee that through a combination of coercive and mimetic isomorphism,³ desired levels of institutional differentiation will be reduced in terms of both the types and range of knowledge offered. But differentiation will continue in the least desired form of inequality, as is so depressingly familiar in the South African scenario. Difference will be on a scale of 'stronger' to 'weaker' as some institutions overcome the formidable obstacles to curriculum and staff integration better than others. By abolishing the BTech degree, the difference between the comprehensive institutions and the universities of technology all but disappears; they will all be **more or less comprehensive and more or less a**

³ See 'Hard Boundaries, Real Drift' in Chapter 11 of Cloete et al, *Transformation in Higher Education: Global Pressures and Local Realities in South Africa*, Juta 2002. <http://www.chet.org.za/highed1.asp>.

university. This direct contradiction of the intentions of the National Plan is not only the result of Ministerial misjudgement: many of the rectors of technikons who vociferously proclaimed a real distinction between academic and career education eagerly pulled the Minister onto the 'universities of technology' wagon.

It is not far fetched to predict that South Africa is heading again for a new binary divide; on the one hand a group of research orientated 'proper'⁴ universities and on the other hand, a group of higher education institutions trying to 'brand' themselves. This is already reflected in the use of descriptive qualifiers – 'comprehensive' or 'technological type' – being used of some universities. In other words, the system will divide into '**reputable**' and '**reputation seeking**'⁵ institutions.

By:

Joe Muller and Nico Cloete

April 2004

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⁴ A recent rating of all universities in the world put four South African institutions in the top 500, albeit in the bottom 250 - reputation will allow them to continue to attract the best staff and students, not to mention research funds. To see the ranking, and the methodology, go to: <http://ed.sjtu.edu.cn/ranking.htm>

⁵ See David Dill's excellent piece on 'The Search for Prestige' on the CHET website: <http://www.chet.org.za/papers/USA.doc>