TSHWANE UNIVERSITY OF TECHNOLOGY: MERGER LESSONS IN DEALING WITH PIPELINE STUDENTS

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April 2005

If we operate from possibility rather than resignation we can create the future into which we are living as opposed to merely reacting to it. (Jaworski, I. 1996. Synchronicity: The inner path of leadership))

1. INTRODUCTION

In line with the vision of reconstructing the higher education system into a more efficient, single, national coordinated system in line with the needs of the 21st century, the new Tshwane University of Technology (TUT), in accordance of the Higher Education Act, 1997, (Act No. 101 of 1997) as amended, came into being on 1 January 2004. In the instance of TUT, it was a case of merging three institutions, Technikons Pretoria, North Gauteng and North-West. For the initial period, the newly formed institution was placed under the management of an interim governing body.

Long before the official coining of TUT on 1 January 2004, pre-merger activities had already begun. The purpose was to determine the status quo of financial processes and procedures, academic programmes offered, staff and student numbers, infrastructure, and so on at the three institutions. Data had been assembled to help recommend inter-institutional arrangements and proposals for future merger processes. This entailed, for example, auditing the various faculty profiles and identifying duplicated academic programmes, processes and procedures in the Academic Administrative environment and student support functions and cultural differences between the staff and student bodies. Measures to guide the process, such as a schedule for integration and a Merger Plan, were developed to guide the various sectors concerned with integration activities. Various committees and forums, such as the Academic Integration and Planning Committee (AIPC) and an Administrative Integration Committee (AIC) consisting of managers, students and Union representatives from the three campuses, were established to assist with the integration of activities.

The following were identified as key performance areas in the academic planning environment to steer the integration process in 2004:

- The development and approval of new teaching and learning (T&L), research and development (R&D), technology innovation and technology transfer (TI & TT);

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cooperative education strategies, policies, processes and procedures; and other academic related policies.

- The development and approval of a new admissions policy and new registration process and procedures.

- The development and approval of new examination rules and regulations.

- The development of a new Programme Qualifications Mix (PQM), academic programme topography and academic plan.

- The development of strategies for a Total Quality Promotion (TQP) policy and processes for an institutional audit.

- The development of a new language policy for the medium of instruction.

- The implementation of a student enrolment planning process and strategy.

- The harmonisation/consolidation and integration of academic programmes relating to admission requirements, study materials, assessment methods (tests and examinations), selection procedures, and a uniform curriculum for first-year programmes.

The new policies and procedures for guiding the new institution, however, had an impact on the pipeline students who were registered under the relevant policies and procedures of the previous institutions.

At the time of writing this report, TUT was only in the final stages of the interim merger phase and although the TUT Council was in place the appointment of the permanent Vice-Chancellor was still in process, after which the most senior personnel in permanent positions would be appointed, so all newly developed strategies, structures, processes and procedures would depend on the new dispensation's endorsement or alteration.

This case study of the TUT merger (as at March 2005) details the outcomes of steps taken to ensure a smooth transition, with the aim of serving as a learning experience for future mergers. The focus is specifically on the pipeline student.

1.1 The status of the pipeline student

The enrolment of a student, and specifically the registration of that student, is inevitably concluded in terms of a two-party contract, based on the principles of the Law of Contracts which, *inter alia*, is underpinned by the obligation of each party to carry out its part of the contractual deliverables.

All 2005 registered students who registered at one of the previous pre-merger institutions before 2004, and who had not since interrupted their studies, qualified as merger pipeline students. (Students who registered for the first time in 2004 did not thus qualify.) A merger

pipeline student retains the pipeline status for the specific uncompleted qualifications registered before 2004 if

- his/her studies have not been interrupted (i.e. if the student failed to re-register for a term of study for which re-registration was required) for any semester or year before, since his/her first registration up to and including 2005;

- he/she qualifies for future re-registration for the specific qualification in terms of the University's Exclusion Policy; and/or

- he/she does not fail a term of study (Rule 3.1.14 page 24 of the 2005 Prospectus). A term of study refers to a semester or year during which a subject(s)/module(s) was/were offered and failed by the student. If a student fails a term of study for specific subject(s)/module(s), the University may grant discretionary allowance to repeat the subject(s)/module(s). A second failure in that subject(s)/module(s) will allow the student access to the so-called integrated subject(s)/module(s) only.

1.2. Contractual obligations towards pipeline students

The contractual obligations of registering a student (deliverables), besides providing quality education, are to refrain from changing the curriculum and/or curriculum related criteria of the qualification for which the student registered, during the maximum time allocated to the student to complete the qualification, specifically in respect of

- the purpose of the qualification;

- the major field of specialisation of the qualification;

- the original minimum time in which the qualification can be completed;

- the original maximum number of prescribed subjects/modules for the qualification;

- the original admission requirements to register for the qualification; and

- any other changes that would prolong the completion of the qualification by the student.

The above criteria constitute TUT's major obligations towards pipeline students.

1.3 Termination of merger pipeline obligation

The academic progress of all students, including the merger pipeline students, is regulated by the current version of the institution's Exclusion Policy. This policy indicates, *inter alia*, that the maximum duration of a student's endeavour to complete a qualification is twice the minimum prescribed time. A maximum time of six years for the National Diploma and two and four years for the one- and two-year BTech degrees, respectively, can therefore be allowed. The Exclusion Policy, however, also dictates incremental progress barriers or conditions, and should a student consecutively satisfy these incremental barriers, the

prescribed maximum period of twice the minimum duration of a qualification may be allowed. To calculate the last year for recognising merger pipeline students, the year 2003 (i.e. the last year before TUT's merger date of 2004), is taken as the base year. Students who registered in 2003 for the first time at the previous merger institutions should therefore, in theory, be granted twice the minimum prescribed time for completing a national diploma, i.e. six years, and consequently the sixth year after 2003, i.e. 2008, becomes TUT's last year of recognising any merger pipeline obligation.

2. ADMISSION REQUIREMENTS, SELECTION PROCEDURES AND REGISTRATION

2.1 Admission requirements

These were agreed on during the pre-merger phase (2003). However, for the first months of 2004, the various merging partners' existing admission requirements were implemented, as these were the ones used to recruit students during 2003 for 2004. Thereafter it was agreed that the same admission requirements would be used for the 2005 intake.

In May 2004, on the recommendation of the Faculty Boards, the Executive Committee of Senate decided that admission requirements for specific programmes at all the delivery sites should be the same. Subsequent to this decision and in its capacity as Executive Committee of Senate, the Executive Management Committee (EMC) approved the admission requirements on behalf of Senate. The faculties then implemented this decision for the admission and enrolment of students for 2005.

The Pretoria Campus generally had an oversupply of applications, enabling it to select students in the year prior to registration. It could thus apply stringent entry criteria, as well as additional programme criteria, in order to select students for particular programmes. An established process of application and access was in operation, with few programmes having to rely on late applications at the beginning of an academic year. This meant that academic programmes were generally operational by the last week in January. At the two northern campuses, on the other hand, greater emphasis was placed on serving communities, particularly the remote communities, and providing access to disadvantaged students, so most applications were processed at the beginning of January and there was much less emphasis on selecting the 'best' candidates. Also, the academic programme generally started only in February of the applicable year. This created time differences in the progress of the courses and subsequently of the content covered for assessment purposes.

In consequence, for the 2004 intake different entrance requirements were allowed for the various campuses, as appeared in their prospectuses. For the 2005 intake, the entrance requirements were to be exactly the same at all campuses. The following section indicates the impact this had on the compilation of the new prospectus.

2.2 Selection procedures

The Soshanguve campus (Technikon Northern Gauteng) and Ga-Rankuwa campus (Technikon North-West) delivery sites had an open door policy where students were accepted

in some courses as long as they were in possession of a valid Grade 12 Certificate with the minimum requirements. Students who did not comply with the admission requirements were assessed for placement in a Foundation Programme. Consequently, agreement was reached to institute a Universal Potential Determination Assessment, which had been part of the selection process at other delivery sites in the past. All parties agreed that the process should be fair and that there should be no discrimination against any prospective student. All campuses used these potential assessment tests as supporting information in deciding whether or not a student was to be accepted. All delivery sites agreed that students who proved to have the required aptitude, even though they did not meet the minimum admission results, would be granted conditional acceptance.

2.3 Registration

At the time of writing the registration process was on track and going well. Communication with the various learning sites was a daily matter and problems were addressed the moment they arose. With approval of the new admissions policy, an initial operations plan was drafted to guide the registration process as follows:

- Students were registered according to the enrolment plan as proposed in the Institutional Operating Plan, which proposed that the enrolment ratio per delivery site would be retained as in the pre-merger phase.

- All common first-year programmes were aligned and fee structures for first-year students had to be agreed on in time for publishing in the merged institution's prospectus. However, at the time of writing the fee structures for pipeline students had still not been solved and were in the process of being addressed.

- The minimum admission requirements, as stipulated in the report *National Education Policy* (Report 150 (96/01) of the Department of Education), were adopted as a starting point, and persons involved in the selection process for first-year students were informed accordingly. Students who had already been turned away because of higher admission criteria were to be reconsidered.

- Delivery sites were asked to provide quotas of new student intakes to enable the handling of applications and to inform students when programmes were full. When a student had paid the admission fee at one delivery site and there was no more space available, that student would be directed to other delivery sites for registration − without paying a further admission fee. In these cases, fees would be transferred between campuses – pro rata adjustments being made through journal entries.

- Not all stakeholders initially accepted the proposal of a one-stop registration process because at some delivery sites a policy of non-acceptance of cash was enforced for security reasons. After security measures had been investigated, the problem was solved by the decision to accept cash at the campus where the environment was deemed to be safest. At the other delivery sites, students were advised to make deposits into an allocated bank account. At the time of writing a one-stop registration venue was in the planning phase for the Soshanguve campus.

2.3.1 Registration and Information Technology (IT) − ITS Pty (Ltd) was asked to extend the registration programme, proof of registration and registration form or card to all three institutions during 2003. However, there was not enough time to put all three programmes into the system, so the merged registration system only became operational in February 2004.

To ensure a smooth registration process, IT connectivity between the campuses was investigated during 2004. It was found that reaction time would be slow because of the dial-up connections. Printing of data at campuses away from the server would also pose a problem. Members of staff from other delivery sites were therefore available on campuses which needed help. Assistance was also rendered to limit the need of students to commute between the various campuses and where necessary transport was provided.

2.4 Student access to resources

It was also agreed that students would only have access to the facilities on the learning site where they were registered. However, this meant that not all students had access to the best facilities, so current facilities were to be upgraded to the same level. Planning for the use of facilities was referred to the relevant Joint Specialised Team (JST), and a five-year maintenance plan was developed to maintain and upgrade them.

3. PROGRAMMES

3.1 Compilation of the prospectus

In 2004, two versions of one course had to be published in some cases because the curriculum differed in the following ways on the different campuses:

- The same subjects were not offered on all the campuses (with different subjects of choice).

- The syllabi did not correspond.

- Assessment methods did not correspond in certain programmes (2005).

- The mode of delivery was not the same.

Where courses corresponded one hundred per cent, only one version was published, as pipeline students were not affected. The following activities accommodated the differences:

- Courses that did not correspond exactly were published as separate phasing-out courses in three different books (one per campus).

- The first two years of courses were aligned in terms of year or semester modules. Syllabi and assessment methods were also aligned. (This applied only to subjects that corresponded in all respects and which were to be phased out in all three existing courses.)

- Phasing-out dates for these courses were determined according to the exclusion clause.

- Courses (being phased out) that had been incorrectly offered in the past, according to the report *Formal Technikon Instructional Programmes in the RSA,* Vol. 1 – Certificates and diploma programmes (Report 151 (99/01) of the Department of Education), were redressed.

- For courses that had no pipeline students, although they were offered in different ways on all three campuses, no agreement could be reached between the three campuses and the courses were therefore not published as phasing-out courses. Three different courses were published in the campus prospectuses.

- Only one set of new rules applied and only one set of rules was published.

3.2 Duplication and overlap between programmes

The duplication of academic programmes was addressed by identifying relevant integration activities at programme level to ensure that students received the same quality of education.

3.2.1 Integration of duplicated programmes − At the end of 2003, it was indicated that a majority of duplicated programmes on first-year level would be ready for integration on 1 January 2004. First-year subjects were integrated with regard to syllabus, assessment and examination criteria and study materials, such as textbooks. Practically all programmes were integrated as far as possible during 2004 and were therefore comparable or similar across campuses. Other duplicated programmes would continue to be provided until consensus had been reached. The integration of some programmes was postponed to 2005. The alignment of common first-year programmes was recognised as a priority. This process was partially completed in September 2003, and it was suggested that where it was difficult to integrate a programme 2004 should be seen as the interim phase.

3.2.2 Data integration of duplicated programmes − Data integration on all three campuses could only take place at the beginning of November 2004. Qualifications and subjects had to be aligned or integrated. Subject codes for pipeline students were compiled separately. Because only the first- and second-year subjects could be aligned, all the other subjects had to be treated as pipeline subjects. Old qualifications that were being phased out also had to be taken into consideration. Students who had registered for these would complete their studies under the rules for pipeline students.

3.2.3 Integration of study materials − Across delivery sites, an attempt was made during 2004 to standardise content and tests, and materials such as study guides. It was decided

- to audit the study guide formats in use at the three institutions;

- to develop a new or amended study guide for TUT, based on existing formats;

- to put all staff who taught first-year students through a training programme (on developing study guides);

- that the Staff Development Unit should support lecturers in developing guides;

- that the completed guides should be assessed; and

- that the training must be extended to all lecturers in 2005.

The final Study Guides for 2004 were to be ready for duplication by 30 October 2003. Because the new institution lacked a name and logo at the time, a standardised cover page for all was suggested with the programme name and codes on the title page.

The problem based learning approach that was used in departments at some delivery sites meant there were differences in the teaching materials and in the times when the modules were presented. After various integration meetings during 2004, consensus was reached on how this approach would be applied at sites of delivery as from 2005. This decision had financial implications, because not all departments had budgeted for using this approach.

3.3 Duration of pipeline programmes and returning or repeating students

During the pre-merger phase in 2003 it was decided to use an annual phase-in approach for consolidating academic programmes. This meant that all first-year programmes for 2004 had to be consolidated using the same curriculum structure, subject codes, textbooks, study materials and examination papers for all the campuses. For 2005, the first two academic years were to be consolidated, and so on for the following years.

In practice this meant that new first-year students in 2004 received the consolidated academic programme on all teaching and delivery sites where the specific programme was offered. All pipeline students in 2004 continued with their unconsolidated academic programmes. The roll-out in 2005 was similar for the first and second academic years. Pipeline students who failed had to register for the specific subject within the new consolidated programme, but all stipulations regarding their original registration remained intact.

It was decided that pipeline students would continue with their studies in the manner in which they had enrolled. Those who had failed a subject could re-register for the subject(s) in accordance with the stipulations of the newly formed institution for new first-year students. In addition, a uniform policy for historical or hybrid first-year students was proposed.

In line with the rulings of the annual consolidation, as discussed earlier, pipeline programmes are being phased out over a period of the next four years. According to decisions taken during the pre-merger phase and confirmed during the follow-up period, students will be considered pipeline students until they fail an academic year, as stated earlier. They will then slot in with the students enrolled following the merger date. Returning students will be enrolled under

conditions applicable to students in the merged institution. The duration of the pipeline programmes will thus be until the end of 2006.

3.4 Infrastructure for academic and research programmes

Maintenance of the Academic Qualification Structure (AQS) was done on the three different databases of the previous institutions during 2003–2004. During 2005, the two delivery sites of Ga-Rankuwa and Soshanguve did not have to create an AQS, as there was now one AQS for TUT. Qualifications that had not been merged during the data integration were manually captured during November and December 2004 for the registration process in January 2005.

It was proposed as an inter-institutional arrangement that the three campuses would operate their research programmes as usual during 2004, and that alignment would only take place as from 2005. It was also proposed that academics be responsible for determining tuition time, and that a central office be responsible for composing timetables and allocating lecture venues as from 2005.

3.5 Credits and weights

Because all programmes had previously been exposed to the former technikons' convener system, the credits were the same, according to the report *Formal Technikon Instructional Programmes in the RSA*, vol. 1, mentioned above.

3.5.1 Semester courses versus year courses − In spite of agreement being reached on semester courses during 2003, students were registered at Soshanguve and Ga-Rankuwa on a subject-for-a-year basis. During 2004 certain faculties took a firm stand and offered subjects on a semester basis as from 2005. Senate approval was requested by each faculty to change the type of course offered as they saw fit. This created a situation where some faculties offered semester courses and others one-year courses.

4. STUDENT DEVELOPMENT AND SUPPORT

Student development and support is used as an inclusive term to refer to all services, from potential and diagnostic assessments to skills development, learner and academic support, and counselling services.

A unit was allocated the responsibility for student development and support and achieved full integration in 2004. All outstanding policies were approved at EMC level. A successful claim was lodged with the Merger Office of the Department of Education (DoE) for upgrading the facilities and laboratories at the Soshanguve and Ga-Rankuwa campuses. The unavailability of suitable space at the Ga-Rankuwa campus was delaying the project.

The merger posed unique challenges for student development and support because of the significant differences in the way these services were provided and managed at the three

merging institutions – differences in infrastructure, funding, management structures, human resources; and fundamental approaches. The two most critical areas are dealt with in Sections 4.1 and 4.2.

4.1 Equitable access procedures, with specific reference to the involvement in selection and placement strategies

4.1.1 Background to the problem – At the time of official integration of the three institutions (January 2004), no single integrated selection policy was in place and the next intake was in process. This caused difficulties, as academic departments' strategies differed across sites.

4.1.2 Action plans during the merger phase – All academic departments had to be supported in the processes of negotiation to determine their specific and appropriate access strategies and admission procedures. This of course affected both new and pipeline students. Re-admissions were facilitated in many departments through a new process. For new students, the integrated academic departments agreed on a comprehensive potential assessment procedure. However, the various student development and support units that provided assessment expertise on each campus were not integrated, so the unit from one campus had to extend its services to the other merging campuses. This was necessary to facilitate the transitional phase and the progress towards equitable procedures for access in the academic environment.

4.1.3 Reflection on experiences – The process created enormous pressure when it came to providing and extending services and caused serious logistical problems that were overcome only with the goodwill and commitment of the staff involved. Staff travelled between the three sites on a daily basis to help with assessment sessions, and all administration was coordinated by one central office. Such extension of services included, *inter alia*, extended working hours, travelling and materials − and these also had financial implications.

4.2 Provision of student development and support services on all delivery sites

4.2.1 Background to the problem area – Because these services differed greatly between the three institutions and had not been integrated, there was much pressure when it came to providing equal services in student development and support across the delivery sites. For example, student development and support programmes that were facilitated as part of the formal curriculum (i.e. Life Skills Training, Reading Skills Development, and Language Proficiency Development) were required on all sites, but were not yet available to all by the time the academic year started in 2005. Student politics arising from the merger meant that there was great sensitivity to such inequality. Pipeline students wanted to see the benefits of equal services across delivery sites, but these services had not been prioritised for integration in the pre-merger phase. This non-prioritising stemmed from a historical view of student development and support as a reactive function on one of the delivery sites, whereas it was

positioned on another delivery site as a partner to the academic department, and was in many respects proactive in developing and supporting students.

4.2.2 Action plans during the early merger phase – The need for services within the academic sphere required the establishment of informal partnerships and the extension of services to ensure a proper transition. As academic departments progressed with integration, it was a high-risk approach not to provide all the necessary development and support services. Not providing the services would have impacted negatively on academic integration in some respects and on the future role and position of the Student Development and Support Unit. Some aspects could be addressed by, for example, adjusting the curriculum. However, actual on-site service delivery remains a problem.

4.2.3 Reflection on the experience – As with admission and placement, the lack of integration in student development and support services and differentiated funding and management on the different delivery sites caused serious difficulties when it came to providing equal services.

4.3.3 Recommendation –To ensure stability for pipeline students and maintain and extend services as required by an integrated academic structure, the experience of the TUT merger suggests that a parallel process should be followed where the integration of student development and support services and the integration of academic structures can be harmonised. This would enhance stability for both pipeline and new students and be supportive to the integration of academic activities.

4.4 Cooperative education

It was decided in 2003 that Cooperative Education would be managed in the same way during 2004 as it had been prior to the merger; and that 2004 would be used for the integration process. This meant that Cooperative Education was managed by the faculties at the Pretoria Campus and by two units at the Ga-Rankuwa and Soshanguve Campuses.

However, from a Quality Assurance perspective, in terms of experiential learning the two northern campuses possessed cooperative education units that were responsible for the placement, monitoring and evaluation of students, and generally for liaison with industry. At the Pretoria Campus, the model followed was a decentralised one, where lecturers in individual programmes took responsibility for placing, monitoring and evaluating students. The different approaches had very different cost and quality assurance implications. In the decentralised model, it was often not possible for lecturers to make more than one site visit while students were engaged in experiential learning. At the two northern campuses, because of the limited number of programmes and the existence of cooperative education advisers, more attention could be given to this mode of learning and its outcomes.

A steering committee, with equal representation by the three campuses, has made good progress with finalising the policy, strategy and structures for Cooperative Education.

4.5 Recognition of prior learning (RPL)

This process was assisted by the development of a new TUT policy that consolidated and accommodated all the merging partners' processes. However, separate polices and processes were applied until the new policy was approved by the EMC.

5. MULTI-CAMPUSES

Early in the interim merger management phase in 2004 it was realised that to create a fully integrated institution the functioning of the different campuses would need in-depth scrutiny, discussion and planning.

5.1 The Organisational Development Initiative (ODI)

In May 2004, the interim EMC agreed to launch a major Organisational Development Initiative (ODI) throughout the institution. This initiative included the following components:

- Buy-in into the vision, mission and goals. This has been extremely important in order to obtain synergy on the way forward for the institution as a whole and its various components.

- Establishing the reason for the motto 'We empower people'. It was necessary for both staff and students to understand and accept the meaning in a true spirit of building the next generation of leadership for South Africa.

- The foundational agreed-upon values for TUT. This is the glue that binds the TUT culture together. It determines the behaviour towards and interaction with one another and other stakeholders.

- Through the structured workshops at different levels and in different environments a Leadership Charter was developed, based on individual views on leadership, cultural model acceptance, leadership debate and charter development. Finally, all participants gave their personal commitment to the developed charter.

The following approach was used at the TUT's various reporting levels in developing the institution's organisational structure and management. In the first instance, agreement had to be reached on design criteria. This included

- alignment to TUT's vision and strategies;

- provision for geographical spread;

- provision for different teaching and learning strategies;

- consideration of the effects of decentralisation and centralisation;

- facilitation of the best type of coordination;

- encouragement of teamwork;

- consolidation of the different teaching and delivery sites;

- accommodation of TUT's development phase and capacity building;

- allowing a reasonable range of control mechanisms towards a flatter structure; and

- ensuring that TUT transformation was aligned with national education policies.

More than 300 staff members (reporting levels 1–4) were given the opportunity to present their proposals for the TUT structure within their environment. Thereafter, rigorous debate and discussions took place with the ultimate goal of reaching progressive consensus. During the process, it became clear that new concepts of personal responsibility and joint accountability had to be defined so as to develop an integrated structure.

6. POSTGRADUATE STUDENTS

Deliberations on postgraduate students started almost immediately in the pre-merger phase. In 2003, the budget was still separate for all three institutions. In 2004, the *Guidelines for full-time postgraduate study at TUT* appeared and were approved by all parties concerned. From the second semester 2004, postgraduate students on all campuses were treated the same. No problems were experienced in this area as only the Pretoria Campus had postgraduate programmes, while Soshanguve had only one master's programme (which was not offered on the Pretoria Campus). Students are given the opportunity to conclude postgraduate studies under the old rules

- if the maximum duration of studies changes (this includes the exclusion rule); and

- if research related matters of the students' study, which could include the pass requirements, differed.

7. PROFESSIONAL BODIES AND POLICIES

7.1 Professional bodies

As certain faculties had no professional registration requirements, no problems were encountered. In the Health Sciences, no changes were made in the programmes (as approved by the professional bodies). Therefore, it was not necessary to contact them about merger issues. Pipeline students would graduate under the rules and regulations that were in place before the merger and therefore under the same conditions agreed upon with professional bodies.

7.2. Amending or reconciling divergent or different rules

7.2.1 Policies and processes − During the period July to November 2003, the JST (Quality Assurance) compiled a comprehensive list of policies operational at the various campuses. These included policies directly applicable to academic delivery, as well as those pertaining to the range of support services.

The agreed process was that the various JSTs would review the policies applicable to their respective fields of responsibility. The Academic Integration and Planning Committee (AIPC) and the Administration Integration Committee (AIC) became, in 2004, the formal structures through which the consolidated and reviewed policies would be channelled for debate, before being recommended for approval by the EMC. These committees included the academic environment (AIPC) and all the non-teaching environments (AIC), with both committees also including representation from the unions and students.

A process was established whereby a consolidated and reviewed policy would have to conform to a format that TUT adopted in 2004. The draft policy and/or procedure was then placed on the Intranet for university staff to note and comment on; it was then adapted to incorporate comments, before being submitted to the AIPC and AIC. In this way, awareness of policy was created, with ample opportunity for staff and students to comment on and debate policy issues. Where consensus could not be reached, the policy was referred to other forums, such as the Institutional or Dean's Forum, for further discussion and input.

7.2.2 Problems experienced – The process described above was designed to ensure that policies would be 'owned' and therefore applied and adhered to, but it has meant that the pace at which policy was refined and finally approved has been quite slow. For instance, because of the process of consultation and consolidation, the assessment policy was only tabled at the AIPC and AIC meetings of 7–8 March. While this process is comprehensive and presumably now widely accepted, this has meant that, in the absence of new TUT policy in particular areas, the specific policies of the former three technikons continued to be applied after 1 January 2004. This has been the case for most of the policies.

7.2.3 Rules not classified as pipeline rules − Any rule that falls outside the category of pipeline rules may be changed by TUT for any year of a pipeline student's study, with due consideration of TUT's obligation to always be sensitive to the effect a rule may have on its students. One such rule falling outside the parameter of pipeline rules is the Exclusion Policy. This policy regulates students' academic progress, and since students' academic success is directly linked to the university's subsidy formula, continual changes to the policy are inevitable. All students, including pipeline students, are therefore subject to the latest version of TUT's Exclusion Policy.

8. MANAGEMENT INFORMATION AND IT SYSTEMS

8.1 The ITS merger project

For a merged institution to function as an IT entity, it is necessary to work in a consolidated environment with a transactional processing system. To achieve this, a project was initiated in March 2004 with the sole purpose of merging the databases of the Pretoria, Soshanguve and Ga-Rankuwa campuses into a single database and developing integrated business processes for TUT. The objectives of the project were:

- The successful installation and implementation of hardware and software and the setting up of a test and production environment.

- The successful implementation of new integrated business processes for TUT.

- The conversion of the three campuses' code structures into a single code structure.

- The consolidation of the local (customised) software of the three campuses into one set of local software for TUT.

- The merging of the data of the three campuses into one database for TUT to ensure data consistency and integrity.

- The integration of peripheral systems.

- The acceptance of the implementation of set objectives through an audit.

The project was initiated with the establishment of a steering committee, a project team and workgroups. The project team and workgroups consisted of staff members of all three campuses. Information sessions were held to inform the workgroup members of their required output and due dates. The project team, together with the workgroups, was responsible for drawing up new integrated business processes and compiling new code structures for TUT. These were approved by the relevant management structures. Hardware and software were installed and implemented successfully and the test and production environment created.

Owing to the delay in compiling the topography and organisational structure of the institution, and project team members' non-commitment and lack of ownership responsibility, the compilation of the code structures was delayed, thus delaying the project. Its original completion date was to be 3 October 2004, but this was moved to 14 November 2004. This delay incurred additional costs to TUT. The software company, ITS Pty (Ltd) completed the test conversion and merger phase on 24 October 2004, after which the users tested the data for correctness and completeness.

A Business Continuation Strategy was drawn up for the downtime period and was distributed to all TUT staff members via e-mail. The strategy and conversion tables were made available on the Web. New student numbers were generated for students with duplicate student numbers on the three campuses and letters were sent informing them of these changes.

On 29 October 2004, TUT gave ITS written permission to proceed with the final conversion and merging phase. The final conversion and merging of data from the three campuses started on 29 October 2004. Although numerous problems were encountered during the two-week period, ITS completed the conversion and merging of the data on 14 November 2004, after which TUT staff members tested the converted and merged data. During this testing phase, it was established that there was a problem with the transaction types on the Financial System. ITS was asked to re-convert the transaction types of Ga-Rankuwa and Soshanguve. This was completed on 17 November 2004. The TUT staff were asked to test the converted and merged data again, especially the financial data. Data integrity problems were then identified. Codes had been used without the existence of a proper definition. These codes were identified and rectified. Data were converted and merged successfully and the ITS system was made available to TUT staff on 23 November 2004, after which normal operations began.

Any problems encountered were resolved by ITS, TUT staff members or the Database Administrators. The conversion and merger of the ITS databases were successful. An Audit Report from KPMG, TUT's auditors, was received and all outstanding issues resolved.

Except for the additional cost incurred, owing to the delay in completing the code structures, the rest of the expenditure was within budget. The only objective that was not completely met was the consolidation of local software. As an interim solution, all local software was made available to staff members and a separate investigation launched to consolidate and eliminate obsolete local software. The project was officially completed and handed over at the ITS Steering Committee meeting held on 3 March 2005.

8.1.1 Lessons learned

These were as follows:

- There needs to be more frequent and better communication among staff members.

- The topography and organisational structure must be approved and implemented.

- Supervisors and managers must guarantee staff cooperation and commitment.

- The Project Team members must be released from normal daily operations.

- An expert in each department/area must be identified and made available to the Project Team and/or workgroup.

- Software companies (ITS in this instance) must be more involved.

- The implementation date must be set during a period that will affect the institution the least.

- More time needs to be set aside for compiling code structures and conversion tables.

The following were successfully achieved:

- The installation and implementation of hardware and software and the setting up of a test and production environment.

- The implementation of new integrated business processes for the university.

- The conversion of the three campuses code structures into one code structure for TUT.

- The merging of the data of the three campuses into one database for the University to achieve data consistency and integrity.

- The integration of peripheral systems.

- The acceptance of the implementation of set objectives through an audit.

8.2 A management information system (MIS) in a merger environment

The following activities ensured a smooth consolidation and implementation of one MIS for all the relevant delivery sites:

- A specialised team consisting of representatives from all three campuses was established to ensure all parties participated. Meetings were arranged once a month.

- Best practice with for an MIS in higher education was identified. The Enterprise Information System (EIS) at the Pretoria Campus was selected as this was the only system in operation.

- Need analyses were conducted to determine TUT management information needs.

- An outside consultant implemented the EIS system at the two other campuses.

- A new centralised MIS database was developed. In the beginning, before the infrastructure was in place, data were collected manually from the other two campuses to populate the new database. After the network was put in place, data were downloaded on the central database on a daily basis.

- A consolidated document with 32 student and staff reports, based on the Higher Education Management Information System (HEMIS) data (2000–2002), was compiled for each campus individually and also a combined version for TUT.

- A consolidated budget reporting system that allowed top management a view of the budget across the three campuses was created.

- A class fee model to assist TUT to determine new class fee structures resulted.

- HEMIS submissions from three campuses were combined into one for TUT.

- A Resource Allocation Model based on student numbers was developed to guide the allocation of funds to different entities.

- A Student Enrolment Planning Model to help TUT manage student enrolment size and shape parameters was developed. This assisted the recruitment and placement activities during 2005.

9. QUALITY ASSURANCE ISSUES

In 2003, the Joint Specialised Team (Quality Assurance) (JST-QA) proposed that a single Quality Promotion Directorate be established to ensure that the quality of programmes and support services at all campuses was approached in a consistent way. This was approved by the JMT in November 2003, and the new Quality Promotion Directorate was established at the Pretoria Campus.

Prior to the formation of the new unit, the then QA unit conducted observations in January 2003 on the registration processes at the three campuses in order to make recommendations for improvement. In August, the unit was also asked to do an audit of some of the first-year subjects with low performance averages to determine what factors were responsible and how this related to the merger and integration of programmes.

In a broader context, the integration and consolidation of policy in the merged institution has been a slow process, which did not support change to similar approaches and methods for pipeline students. Against this background, the following observations are made regarding aspects relevant to pipeline students:

- The report *Formal Technikon Instructional Programmes in the RSA,* Vol. 1, mentioned above prescribes curriculum content and its credits but, traditionally, technikons selected and structured content for the learning programmes. Although learning content at the three campuses generally proved to be similar in broad terms, there were also differences.

- The delivery of learning, however, differed significantly in some instances, where some campuses offered a one-year course while another offered the subject in modules over two semesters.

- Alignment across campuses for pipeline students is thus challenging, as it is not always feasible to change the content structuring of a particular level without affecting the following level. Since curriculum development of programmes generally encompassed the three-year diploma as a whole, achieving consistency across levels in a particular programme, where the approach varies at the different campuses, may not be easy to achieve.

- Generally, monitoring education delivery at the different campuses has been difficult. The various campuses reported differently on student and staff performance and the level of reporting differed in approach and detail. Thus the relationship between such monitoring and quality improvement, as well as budget allocation, is not always clear or comparable.

10. ASSESSMENT

It was decided in principle that TUT should strive to attain the national benchmark for success rates.

10.1 Assessment practices

Assessment practices varied across the various institutions. Some programmes on a particular campus focused on continuous assessment, while the same programmes at another campus focused on formative and summative evaluation, such as a series of formal tests and a concluding examination.

10.2 Assessment methods

A number of major tests and examinations were already integrated in 2004. This meant that they were similar, and written on the same dates and at the same times. Other assessment methods, such as assignments, projects, class tests and so on, were the same and contributed the same weight to the final mark, based on the formula specified in each study guide. In other instances, major test papers from all delivery sites (including satellites) were assessed, and the standard of work was verified and approved. In many instances, one moderator for examinations across sites has been appointed.

There were also problems that needed to be solved in instances where subjects were offered as service subjects on one campus and as major subjects on another. Service subjects are assessed not by means of continuous evaluation but by building up a prediction through test writing and formal examinations. Problems also occurred where students were registered for year courses on one campus and for semester courses on another.

It was necessary to gain consensus among the institutions involved in the merger as to how the above-mentioned factors should be dealt with. Full integration from 2005 was striven for, especially in first-year subjects, whilst integration of second-, third- and fourth-year subjects would follow as soon as possible.

10.3 Assessment processes

An operational plan was drafted on how examinations should be administered in the new institution. A decision was made to implement the Abacus 'O' Examination Programme. It was proposed that all first-year students would write the same class tests, at the same time. Academics would be asked to coordinate test dates, times and venues. However, owing to the difficulty in harmonising the timetables, lecturers were given some freedom to accommodate students with intermediate campus specific tests (conducted under controlled conditions and with the necessary checks and balances built in and with due consultation among lecturers and heads of departments).

Some faculties/departments opted for continuous assessment, in which case predicates would not be available.

10.4 Examinations

10.4.1 Examination timetable − A single examination timetable was to be compiled for all students. Although pipeline students' subjects were not necessarily integrated, corresponding subjects on the same level had to be scheduled for one examination date and session.

10.4.2 Language policy − Owing to the language policy under which students registered, examination papers for some campuses had to be available in English only, while for students at other campuses they had to be available in Afrikaans as well as in English. Examination material such as examination scripts also had to differ for the different campuses.

10.4.3 Examination criteria − As the examination criteria initially differed from campus to campus, three different subject codes had to be created. This resulted in these codes having to be linked to equivalent groups so that they could be scheduled on one examination date and session.

10.4.4 Examination rules − Applying examination rules to pipeline students led to the following problems:

- Admission requirements allowing for supplementary examinations differed (pipeline students from one of the campuses had no opportunities to write supplementary examinations). Special examination papers had to be made available to these students to write supplementary examinations at a later stage.

- Sub-minimum pass requirements for certain subjects differed from campus to campus (e.g. at one campus a sub-minimum of 40 percent was required for admission to a supplementary examination, while at another a sub-minimum was not required and only the final mark was taken into account).

- In cases where students failed a subject, students from one campus had to repeat the examinations in all examination papers, while at another campus they were only required to repeat the paper that they had failed.

10.5 Issuing of certificates

It was agreed that students qualifying before the end of the academic year before the merger date, or beginning the year after the merger (after writing a special supplementary examination) should be awarded certificates by the technikon in the year after merger, as well as by the merged institution, where the studies were completed before the merger. A student

who had never registered at the merged institution would therefore still receive the former technikon's certificate, although that institution would no longer exist after the date of the merger. The former institution's certificate would be conferred at a graduation ceremony of the new institution.

Pipeline students qualifying after the merger, and after having registered with the new institution for at least one study period, receive a certificate from the new institution with an endorsement referring to the names of all the merged institutions. This endorsement will be added for a period of three years, as from 1 January 2004.

11. INTER-INSTITUTIONAL ARRANGEMENTS

Inter-institutional arrangements were proposed by each relevant JST during the pre-merger phase in 2003. This entailed transitional arrangements for admissions and selections, registration processes, new first-year students in existing programmes and new first years in integrated programmes, fee structures and processes, terms of payment, the annual budget for 2004, the payroll, financial contracts and the consolidation of the bank account. The following issues were not planned for and arrangements were made as problems arose.

11.1 Student movement between campuses

Student movement did occur between campuses, although the inter-institutional arrangement was that a student would be active on the delivery site where registered. This resulted in students having two student numbers. An audit will have to be conducted to verify and eliminate this duplication.

11.2 Late applications

It was agreed in 2003 that the closing date for applications would be in August of the current year. However, 'late' applications did occur on the northern campuses, and this caused major administrative problems relating to selection. It was a problem to find enough personnel in January to deal with the number of late applications. The future objective is to inform prospective students wishing to enrol at the northern campuses that applications must be made before August every year.

11.3 Fee structures

Although transitional arrangements were proposed for harmonising fee structures for the pipeline students, major problems were encountered. This process has not yet been resolved, as the proposed Weighted Average Price model for equalisation and phasing in of fees on a year-to-year basis has not been accepted.

12. CONCLUSION

Many merger problems (such as admission requirements, selection and examinations) will be eliminated by first obtaining consensus on aspects such as definitions, parameters, procedures, non-negotiable items and different terminology used for the same concept. The pre-merger phase at TUT was enhanced by the consensus-reaching principle. However, this principle was not adhered to after the merger date in 2004.