Challenges in the Formation of Technikon-Industry Linkages: A Case Study of the Western Cape

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Introduction

The relationship between education and the labour market is beginning to command a wider general interest in South Africa. This general interest coincides with major educational policy reforms that have been underway since the onset of democracy in 1994. These reforms were first implemented within the schooling system and thereafter within the further and higher education sectors. But the labour market has also experienced reforms that have proceeded more or less in tandem with the reforms that have been instituted for the educational sphere. The policy interest however is beginning to shift to the phase where an integration in educational and labour market policy has become critical because the benchmark for successful and winning nations is measured by the degree to which learning and knowledge is contributing to a more robust economy. Such an economy simultaneously contributes to wealth and fully deploys the human resources that are available in the country to reach this end.

These significant policy advances have also led to the reconfiguration of previously established institutions. But in addition, it has necessitated the emergence and establishment of new institutions designed to facilitate the effective execution of the policies, which have been adopted throughout the country. Institutions have also acquired multiple roles but in order to perform the functions associated with these roles, the policy frameworks have generally encouraged and emphasised the need for greater collaboration and partnerships to be built between them.

In commissioning the study, the Skills Development Planning Unit in the Department of Labour was keen to understand the operational conditions and the means that was used by each of the two technikons in the Western Cape to develop and strengthen linkages with the industrial communities. Viewed from one angle, this was framed in terms of the inverse relationship of providing industry with direct sources of skilled labour supply. Viewed from another, it presented an opportunity to provide students and graduates with an opportunity to gain experience in experiential learning through work placements. Through these means it provided graduates with an opportunity of being successfully absorbed onto the labour market by obtaining full-time permanent employment. The study sought to understand the facilitative qualities of a myriad of institutions that were invoked for this challenge. It was also concerned to understand the conditions that were contributing to tensions and contradictory outcomes from these objectives[2].

[2] The evidence to substantiate our understanding of the process of building and sustaining collaborative linkages and partnerships between the technikons and employers on the one side and between technikons and institutions such as Sector Education Training Authorities (SETAs) was generated from field interviews. These were conducted with technikon staff members, technikon students, representatives of industry, representatives of SETAs as well as other key informants. A list of all informants, are provided in the appendix at the end of the paper.

POLICY CONTEXT FOR LINKAGES

The Policy Context

The historical evolution and contemporary location of Technikons in South Africa has meant that a unique set of imperatives has influenced the policy terrain in which they are located as higher education institutions. And while it is probably correct to perceive the policies that have been framed specifically for the higher education sector from 1997 onwards when the Higher Education White Paper was issued, as being an important influence on the technikon sector, it has not been the exclusive factor. The role that has been accorded to technikons historically has not disappeared altogether, and in fact has had an indirect though seldom acknowledged bearing on the policy context. In the contemporary period, this role has been reconfigured with new expectations and functions. It has implied a renewal and expansion of its relationship with traditional stakeholders and unlike the universities the relationship with the labour market has more overt pedagogic and vocational linkages. In addition to the contemporary role as a component of the higher education sector, coupled with historical continuities stemming from its origin, from a policy perspective, the Technikons have been closer to the terrain within which the Skills Development Policies and interventions associated with it have been framed. This can be depicted as the third factor influencing the policy context in which linkages between technikons and industry in particular have developed. Finally, the provincial policy context, particularly as embodied in the quest to prepare the Western Cape for the knowledge economy, exerts an impact on the development of industry-education linkages. A similar impact can be expected to be exerted on technikons in the concentrated economic zones such as the Gauteng triangle and the Pietermaritzburg-Durban corridor in Kwa Zulu Natal. A discussion of the policy terrain in which linkages involving technikons are nurtured with its principal stakeholders is not able to avoid reflections on the context and issues sketched above. However cryptic these are, they indicate the possibilities and orientation of the emerging and existing linkages that have developed or are in the process of being developed.

The higher education system

The Education White Paper 3 explicitly encouraged co-operation and partnership between higher education institutions and all sectors of society. It did so under an agenda in which human resource development was to be supported through life-long learning. High-level skills training, was to be conducted for the purpose of strengthening the country's enterprises, services and infrastructure. The White paper conceived the production, acquisition and application of knowledge to be at the service of national growth, competitiveness and innovation. It was argued that new programmes to perform the above mandate were required at an institutional level. Institutions were further encouraged to increase their responsiveness to regional and national needs by developing appropriate programmes of academic, research and community service. Finally, the White Paper on higher education abrogated previous higher education legislation, including the Technikons Act of 1993. These preceding items of legislation were replaced by the Higher Education Act (No.101) of 1997, which gave legislative expression to the policy agenda that had been set out in the White Paper.

The central themes elaborated in the White Paper were reiterated in the National Plan for Higher Education as the central challenges facing higher education, which the Minister of Education released at the beginning of 2001. An important caveat was however inserted to the above: it is the need to enhance the cognitive skills of graduates so that they are equipped with 'the skills and qualities required for participation as citizens in a democratic society and as workers and professionals in the economy' (section 2.7). The caveat is made on the premise of general coherence in the multiple education and training interventions that have been spearheaded in the first decade of democracy in South Africa. Apart from other criteria, the National Plan for Higher Education requires the higher education institutions in their three year institutional rolling plans to exhibit a sensitivity to government's human resource development strategy, especially in relation to institutional location, vision, mission and capacity (section 2.8.2.2). The need for institutional diversity requires too that the technikons play an important role in providing career oriented programmes in science, engineering and technology. The above announcements are postulated on the understanding that the principal levers through which these policies are to be implemented will be through the use of planning and funding mechanisms.

The relative dearth of policy pronouncements linking the higher education landscape with the skills development strategy, does not mean that the missions and mandates of higher education institutions and the arenas within which skills development takes place is amiss. The policy terrain shaping higher education from the White Paper to the National Plan for Higher Education has consistently signalled that the possibilities for experimentation with new relationships that deepens and strengthens the diversity of institutions and the system as a whole is thoroughly encouraged. To do anything differently is tantamount to legislating the historical experiences and contemporary practices of the entire spectrum of technikons as redundant. And this is not what has been done.

History and the conditions of governance

This presupposes a discussion of the historically evolved role, which technikons have come to play in the contemporary period. The principal function of this role is concerned with maintaining the relevance of the technikons curriculum to the pedagogical and vocational requirements of the working environment. Essentially this has required the technikons system to mediate a relationship between students and graduates, as recipients of instruction and knowledge transmitted by the academic staff at the technikons from one side with the high level labour demand needs of employers on the other. The mediation led to an intervention at which two distinct types of institutional mechanisms were resurrected. The first was concerned to elicit employer views about the appropriateness of the curriculum that was offered by the institution. This was measured through the work performance and worth that the institution's graduates represented to the employers who had hired them. The relevance and quality of outputs was an important gauge of the alignment of the curriculum to the needs of the workplace and the labour market. The body which was constructed to perform this function, is known as an advisory committee and exists for each programme or subject for which instruction is provided at a technikons. There is normally an advisory committee for each academic subject or programme specialization at every single technikons in the country. Advisory committees have

representation from employers and employer bodies as well as trade and professional bodies. Members of the education advisory committee may be drawn from those who serve on the statutory professional councils e.g. nursing, engineering, architecture etc. (See Department of Education, 1988: 110, section 6.3.4.1)

The advisory committees are not decision making bodies and therefore channel its recommendations to the appropriate decision making body within the Technikons: departmental boards which in turn transmit these concerns to the academic boards. Beyond this point the recommendations that stem from the academic boards are regulated through the governance procedures that apply to the entire network of technikons in South Africa. The Committee of Technikon Principals (CTP) is the highest decision making authority through which the collective interests of the technikons community are articulated. In a similar sense, if not arbitrated upon earlier within intermediate structures, the advice dispensed through advisory committees would ultimately be settled on the instructions and prescriptions of the CTP.

The CTP therefore oversees a governance system within the Technikon structure that makes provision for workgroups to deliberate on the academic content and the vocational and career focus of the curriculum that is offered at the Technikons. Not every technikon offers the same programme. Some of these programmes are generic to all technikons while others fill a niche, which is not held to be within the mission and programme focus of every one. A certain degree of homogeneity in the content of specific programmes offered by different technikons is prescribed. The working groups are therefore tasked to maintain consistency in depth, breadth and quality of these programmes through the presence of the experts that are represented on it from each technikon that offers or is intending to participate in the curriculum process of such programmes. A convening technikon is required to take full responsibility for the development, introduction and maintenance of programmes or groups of programmes so that it conforms to existing policies and procedures. An additional function of a convening technikons is to serve as the chairperson of the working group and to expedite matters affecting the introduction or amendment of courses. The function of chairperson is vested in the Vice-Rector (Academic) for the particular convening technikons. Decisions are derived through the mechanism of sufficient consensus. The final arbiter within the ambit of the collective technikons structure remains the Committee for Tutorial Matters and thereafter the Executive Directorate of the CTP. At present, the amendment of an existing programme or the introduction of a new programme must take into consideration policy relating to SAQA and the NQF. In addition, the programme must be approved by the Department of Education. The advisory committees of a convening technikons have a higher chance of drawing attention to its recommendations compared to instances where the authority of convening is held elsewhere, at another technikon.

An elaborate set of criteria and regulations empowers the convening technikon to chair and convene work groups. In total, the Cape and the Peninsula Technikons currently have the responsibility for convening twenty-eight programmes. Consequently this requires a support apparatus at the institution that is attuned to the conditions specified above and within the performance of the appropriate protocol and function of each convener group. The entire process is premised on a conception of development that is upheld through collegial practices that in turn is sustained through

consensual modes. The programmes that are within the auspices of the above are listed in Table 1.

Table 1: Workgroups convened by Technikons in the Western Cape

Name of Programme	Qualifications Level	Convenor Technikon
Cartography	NC, NHC, ND, B Tech, M Tech, D Tech	Cape Technikon
Dental Assisting	NC	Peninsula Technikon
Dental Technology	ND, B Tech, M Tech, D Tech	Peninsula Technikon
Design	M Tech, D Tech	Cape Technikon
Adult Basic Education & Training	NHC, HD, NHD, B Tech	Peninsula Technikon
General Education & Training (Foundation & Intermediate Phases)	NPDE, B Ed (GET)	Cape Technikon
Engineering: Electrical	ND, B Tech, M Tech, D Tech	Cape Technikon
Engineering: Mechanical	NHC, ND, B Tech, M Tech, D Tech	Peninsula Technikon
Financial Information Systems	NC, NHC, ND, B Tech	Cape Technikon
Fisheries Resource Management	ND	Cape Technikon
Food and Consumer Services	NC, NHC, ND, B Tech, M Tech, D Tech	Cape Technikon (from 2002)
Horticulture	ND, B Tech, M Tech, D Tech	Cape Technikon
Interior Design	NC, NHC, B Tech, M Tech, D Tech	Cape Technikon
Internal Auditing	NC, NHC, ND, B Tech, M Tech, D Tech	Cape Technikon
Landscape Technology	ND, B Tech	Cape Technikon
Oceanography	ND, B Tech, M Tech, D Tech	Cape Technikon
Open Space and Recreation Management	ND, B Tech, M Tech, D Tech	Cape Technikon
Optical Dispensing	ND	Cape Technikon
Packaging and Printing Technology	NC, NHC, ND	Cape Technikon
Plastics Design Technology	NHD, M Dip Tech	Cape Technikon
Printing Management	NC, NHC, ND	Cape Technikon
Radiography (Diagnostic & Ultrasound)	NC, NHC, ND	Peninsula Technikon
Radiography (Nuclear Medicine & Therapy)	ND	Peninsula Technikon
Retail Business Management	ND, B Tech	Cape Technikon
Surveying	NC, NHC, ND, M Dip Tech, B Tech, M Tech, D Tech	Cape Technikon
Tourism Management	NC, NHC, ND, B Tech	Cape Technikon
Tourism and Hospitality Management	M Tech, D Tech	Cape Technikon
Town and Regional Planning	ND, B Tech, M Tech, D Tech	Cape Technikon

The importance of the details that have been elaborated above is to illustrate the lines of communication and decision making between stakeholders who articulate their views through advisory committees and the mechanism by which these views are accounted for and given concrete expression in the governance structures of the technikon sector. We have indicated that the governance structure, regulating co-operation between technikons is very complicated. It implies that stakeholder recommendations and sentiments about changes that need to be brought about to align the career focus and curriculum orientation of the programmes offered has to be

mediated creatively. There is a greater propensity for the recommendations from an advisory committee being followed through at technikons that have the responsibility of convening working groups. It means that at an institution such as the Peninsula Technikon, the advisory groups in Dental Technology, Adult Basic Education and Training, Mechanical Engineering and Radiography at these institutions are likely to move the decision making process on curriculum issues more significantly compared to advisory committees in the same programmes at other technikons. Organised and large constituencies have a greater capacity than smaller groups of orchestrating a coordinated campaign, which would be reflected in the positions taken by the advisory committees. A similar capacity can be wielded through the professional associations and bodies and the positions that are articulated at these by organised and large interests. Large stakeholder interests such as a national company or statutory professional councils can therefore consistently raise the same issue no matter where the advisory groups are and these would illustrate the general will. The ability to convey valid concerns matters for stakeholders who are inserted into sectoral or geographical niche areas such as the information and technology sector or the wine industry. Advisory groups that are outside the loop of communicating directly through their convening technikons would be required to render competing claims to an audience that is essentially displaced from the points where the issues that the recommendations are designed to redress arise. In such instances, it is more difficult for the same claims to be made by an advisory committee, particularly one that draws upon the unique experiences of provincial or local development.

An understanding of this important dimension of the policy process is essential, especially when information has to be transmitted rapidly through the system so that the strategic adjustments in the planning cycle of organisations can be made. Examples, which can be used to emphasise the point, include advisory committees where the Cape Technikon is the convening institution for the following programmes: fisheries resource management, oceanography, packaging and printing technology and tourism management. The Western Cape economy has a comparative advantage and is a niche economic segment for each of these programmes that have been alluded to. Assuming that these are programmes that are offered by some of the in-land technikons as well, what consideration would be given to the feedback and recommendations from the advisory committees at each of these institutions? It would be different though if a parallel programmes were offered at the Peninsula Technikon because feedback from stakeholders on the advisory committees would have greater validity, and ought to be geographically consistent. Nonetheless there will be difficulties about conveying these insights into tangible measures that are discernible to the initial instigators.

The above merely represents one dimension of the manner in which governance procedures function to provide technikons with stakeholder feedback. These governance procedures appear to distinguish the technikons from the universities but they are also consistent with the philosophy of education that technikons have consistently embraced. This philosophy essentially to educate and train learners in the applied sciences with the object of contributing directly to practical concerns in the economy and society. Within the technikon sector, this is referred to as a process of experiential learning. It implies instilling students with a duty to community service, translating theory into practice by various means including a transfer of know-how. In addition it implies providing students and staff with the opportunity to

be engaged in applied and practically orientated research and development. The practical expression of this particular educational philosophy is cultivated through a system of experiential learning embodied in the form of job experience placements. These have a wide variety of forms that have reconfigured traditional apprenticeship modes into dynamic education-production formats. Internships and job placements over a specified time period are examples that involve the connection between classroom instruction and experience at the workplace. It is presented as an opportunity to learners who have not yet graduated from full-time tertiary education to simultaneously pedagogic advances through vocational involvement.

The national skills development strategy

The final policy imperative, which has a more overt bearing on the technikons as a branch of higher education, is exerted through the national skills development policies and strategies. The stronger emphasis towards vocational and career concerns has meant that technikons have had a closer gravitation and confluence to issues of skills development, training incidence and experiential learning. In the context whereby the complicated pedagogy of the workplace and work related issues had not been adequately theorised, the closer affinity of technikons to these concerns had inadvertently proscribed them with an inferior status vis-à-vis the universities. It had been imagined too that the universities had become the progenitors of knowledge and the ultimate arbiters and legislators of what was deemed to be its legitimate scientific reproduction or its truths. At a systemic level, the national skills development strategy has proceeded to remove the artificial boundaries that existed between education and training, which had previously existed under apartheid. Apart from bearing the effects of severe racial skewing, training had been accorded a low status and compared to the general education streams was allocated limited public financial resources. Removing these boundaries that served to impede the growth and development of learning has also implied reversing the low status that had been accorded to the practice of training. Starting with the policy shifts, fundamental changes have taken place to dispel this assessment.

The first has been the development of a national skills policy in South Africa. The second revolves around the establishment of a regulatory framework within which this framework is being substantiated. In both instances the incorporation and insertion of technikons into the policy and regulatory framework of skills development in South Africa has been subsumed under the broader higher education concerns. It has been subsumed too under the concerns, which govern the institutions and regulate the qualifications structure and give assurance to the quality of programmes that emanate from it. Some gaps exist in this area and the gaps are essentially about the difficulties of translating policy into practice. Despite the gaps however, the challenge is to translate the plethora of opportunities that stem from these concrete needs to a situation whereby a larger number of emerging workers can be inserted into placements, thereby providing them with the experience of employment. Essentially therefore, the development of a national skills policy is the final pivot to direct the public higher education institutions, including the technikons to become centrally involved with the development of South African human resource capacity. The component to this that is most relevant to the present study is the development of learnerships.

The Green Paper on Skills Development defined learnerships as a mechanism to facilitate linkages between a structured learning environment and the place of work, so that graduates who obtain a qualification would be equipped with a greater capacity and ability for work readiness. While it was argued in the Green Paper that the direction and fields into which learnerships are established had to be demand driven, there was no prescription preventing adjustments being made to create incentives as a facilitative device to set the process into motion. The structured learning was to take place through fundamental learning, core learning and specialisation. The specialisation component to the structured learning was perceived to take place at an institution such as a technical college or through other accredited training providers. At the time the Green Paper was formulated (1997) the technical colleges were perceived as the central public funded labour supply institutions that would provide the specialisation component to the structured learning. In the succeeding five years the context of the global economic environment and the conditions that have enable South African enterprises to gradually penetrate markets in technologically higher value adding sectors, means that a wider spectrum of education and labour supply institutions can be appropriately utilised for the objectives set out earlier. The objectives are still absolutely valid but the means that can be deployed to tackle these may have broadened to include many more programmes currently offered within the current configuration of technikons and universities. It also implies that the new institutions that have been established out of the process can serve as vehicles to meet the skills development objectives.

The Green Paper on Skills Development attributes a central role to job placements because without the experience of employment, learnerships would cease to exist. Provided that learning outcomes are achieved, the form of work experience does not matter: it is permissible to derive it from single workplaces or from a cluster of workplaces. Encouragement, pending further investigation, was given to group training schemes as well. The Skills Development Act (No.97 of 1998) was aimed at promoting the conditions for the policies outlined in the Green Paper to be implemented. Pivotal to this process are the improvement in the facilitation of learning through the promotion of learnerships. And as was indicated in the Green Paper, the Act reaffirms the necessity for it to incorporate structured learning in combination with a component of practical work experience. The key vehicle identified to drive the process, are the Sector Education and Training Authorities. By implication the Act is a licence for the SETAs to initiate learnership agreements with accredited training providers that add the highest value to the various elements that make up the learning process: both structured learning and learning derived from practical work experience. For a host various reasons this particular feature in the implementation of the policy has been relatively slow at being initiated but it is starting to grow. From the evidence that is available to us, the trend is certainly for this to grow and develop much further. The paper alludes to the manner that this has been successful by providing a purview of experiential learning that is conducted through work experience activities. As well as doing so, it illuminates the assortment of linkages that have been nurtured between a variety of institutions and institutional types, including the technikons. Technikons can generally be conceived as performing the role of labour supply and the SETAs provide the intermediation between the technikons and the firms in the economy or the institutions of labour demand. The ultimate purpose of these relationships, are to advance the learning process across the national system and to prepare it for the challenges of a global

knowledge milieu, particularly a milieu that is regulated by a complex set of imperatives such as efficiency, quality, fitness for purpose etc.

The Provincial Context to Prepare for the Knowledge Economy

In 2001, the Provincial Government of the Western Cape released a White Paper on 'Preparing the Western Cape for the Knowledge Economy of the 21st Century. The White Paper was developed through a range of stakeholder inputs. Its key objective is to develop means to channel the forces of globalisation to eliminate poverty and empower the people of the region to lead fuller lives. An important feature of the strategy outlined in the White Paper is concerned with developing the province as a learning region, which is capable of competing effectively in the global knowledge economy by serving as a leading centre for entrepreneurship and innovation. The task that the White Paper sets out for the universities, technikons and other tertiary institutions in the province, relate to the promotion of industry-linked teaching and research initiatives. A concern was raised about restructuring the institutional landscape for provincial growth and development in order to obtain greater integration, co-ordination and partnership between the implementing agencies. These include national and provincial statutory bodies that operate within the province as well as metropolitan and local government structures, the Sector Education Training Authorities and tertiary education institutions. In addition it includes business chambers and associations, union federations and NGOs.

Although it recognised the fact that higher education is a national competence, this did not prevent the White Paper from insisting that an important component of its policy objective was:

> 'To bring together universities, technikons, and other research bodies in the Western Cape, and firms and industry associations to promote a world-class approach to industry-linked teaching and research' (WP: section 6.4.1).

Furthermore, recognition was given to developing new, longer and innovative forms of work placements and internships for those who were in the process of entering the labour force. This was seen as essential because it enabled students to gain relevant practical experience, improving their transition from education to work and increasing their prospects of entering employment on a more permanent basis.

Each of the four policy factors or influences are designed to support existing conditions in the formation of industry-education linkages and as such contain a facilitative dimension.

Type of Linkages[3]

Background

Internationally, cooperation between universities and technikons and corporations/ businesses and industries is a longstanding practice. These cooperative and collaborative linkages are strengthened through philanthropic gestures but the labour

[3] The section on 'Background', 'Institutional Profiles' and 'Existing Technikon-Industry Linkages' were drawn from a preliminary report written by Charlton Koen.

supply chain represents a more concrete manifestation of the symbiosis between the higher education system and the corporate, business and industrial environment. In the applied sciences in particular (engineering, chemistry etc.), innovative business practices have evolved from breakthroughs that have taken place in academic research laboratories. A host of historical examples can be invoked to demonstrate the application of scientific ideas to industrial practice. These have extended to innovative exchanges between scientific institutions and industrial organizations. At present, the interface between academia and industry continues to revolve around information dissemination and innovation and are increasingly identified as key elements in economic growth and skills development. Co-operation is also increasingly being viewed as stimulating flows of knowledge between academia and industry which impacts positively on the operation of each sector.

- Indeed, industry-academic (university and technikon) links have acquired a prominence on the international higher education policy agenda. Martin (2000) and Hernes and Michaela (2000) indicate that these linkages may:

- Be considered as a strategy to improve the relevance of teaching and research activities in higher education institutions. In this sense, linkages may relate to partnerships around research and development, in which useful spin-offs are reaped by each of the partners.

- Involve collaborative activities to provide technical assistance to companies or to upgrade existing low-level technology and management techniques. Similarly, higher educational institutions can benefit from useful donations of specialized machines and equipment from enterprises, which under normal circumstances would either be traded in or scrapped.

- Provide staff and students with opportunities to become familiar with state-of-the-art industrial science and technology and management systems and an understanding of the constraints that confront industry. Many case studies formulated at the Harvard Business School stemmed from linkages and opportunities, which were presented to provide credible solutions to specific industrial or business problems.

- Lead to improved interaction of higher education departments and employers resulting in changes to specific degree programmes so that these have a closer semblance to the technologies and practices that are deployed at the place of work.

- Produce improved training and employment prospects for students.

- Enhance the image that higher education institutions have within the broader community about the contribution which they make to the economy as a whole. These considerations are important, since they allow the higher education institutions to build a capacity to continue making the contributions that are deemed necessary by the broader community.

Linkages that incorporate the above features can be developed along a wide front of activities particularly within technikons as well as institutions that are gravitating towards becoming more developed institutes of technology. In all of these, linkages embodying elements of research and development activities, technological innovation, organisational learning and consultancy work as well as teaching and curriculum development activities can evolve. Less structured linkages are also possible. These can include: generic interactions that involve industrial support to students, mutual visits, jointly organized meetings, conferences and seminars, industrial representation on governing boards of higher education institutions.

Institutional Profiles

The brief institutional profiles of the two technikons provide an insight into the internal configuration of each and the institutional context upon the formation of broader linkage and placement issues.

Cape Technikon

The Cape Technikon has registered a clear intention of expanding its research and post-graduate outputs. Over the period 1990 to 2000, there has been a steady increase in the number of graduates who have qualified from the institution. By embracing the notion of lifelong learning, the Cape Technikon aims to eventually become a University of Technology. In 2001, 12517 students were enrolled at the institution. The effort to create niche areas in six distinct faculties of teaching and learning has resulted in a positive attitude being created about the standing of the institution and its capacity to confront the challenges of change. Emphasis has also been placed on utilising interactive learning mediums particularly electronic or e-learning which was being used by 7457 students in 2002 to support learning in various ways. This has a direct bearing on the contribution that it can make to the development and growth of the Western Cape.

Through it strategic planning and evaluation processes, the institution has identified six challenges for the institution to meet it strategic objectives. Doing so successfully has implied a radical reorientation in the institution to gear up towards meeting the challenge. The six challenges are:

- Reviewing and revising the institution's programmes to ensure that these are responsive to economic and development needs of a changing society;
- Establishing a Quality Management System and improving learner performance
- Increasing the volume of problem based research;
- Establishing and nurturing partnerships and community service;
- Creating and nurturing an institutional culture for equity of opportunity for all students and staff; and
- Promoting lifelong learning by increasing and broadening access.

Between 1990 and 2001, the overall number of qualifications awarded to graduates has increased by 44%. The award of B.Tech qualifications has witnessed a more rapid increase (86%) during this period. From 2000 to In order to expand its internal capacity to offer programmes that are in line with its mission and objectives, the Cape

Technikon plans to increase the proportion of staff who hold masters and doctoral degrees from its 2001 level of 38.28% and 7.26% respectively.

Since 1994, following trends at other historically white institutions especially Technikons the proportion of black and women students has been increasing steadily at the Cape Technikon. In 1995, 31% of student enrolments but by 2001 this had increased to 57%. These changes were reflected in the shifting gender profile of the institution: in 2001, female students made up 48% of the student body. However, the relatively low proportion of black staff in academic positions combined with the relatively low proportion of black and women staff in managerial positions remains a challenge that has to be breached in the future as the institution strives to create a inclusive institutional environment that is more representative of the community it serves.

Peninsula Technikon

The Peninsula Technikon has several strengths: stable management, a financial surplus, a steady flow of students and is busy improving its academic programs, infrastructure and research capacity. In particular, Peninsula Technikons aims to focus its institutional efforts on increasing student enrolments in the Faculties of Engineering and Sciences, but not in the Faculty of Business. Indeed, based on institutional planning projections, enrolments in the Faculty of Business should decrease in favour of increases in the other two faculties. Conversely, infrastructure provision in Business and other Faculties should improve in the short-to-medium term. In this way, Peninsula Technikon aims to stabilize and provide for controlled growth in student enrolments, whilst improving the resources at the disposal of staff and students.

The institution is developing benchmarks for improving institutional efficiency and has targeted co-operation with industry and other institutions as the most important mechanisms through which to improve opportunities for students and staff. Much of its performance improvement work further targets staff training, upgrading of staff qualifications and staff development activities. In order to enhance institutional efficiency there is a need to improve quality assurance measures and to provide opportunities to broaden staff access to to resources and capacity.

The student headcount enrolment at the Peninsula Technikon is approximately 8 400 students. The largest proportion of students, are in Science and Technology programs (48% on average). In 1999, 27% were in Business programs and a further 25% in Humanities programs. Interestingly, in 1999 most students were also female (54%) and African (62%). Of concern regarding student profiles, is their academic performance, which affects throughput rates and retention rates. The retention rates at the Peninsula Technikons are relatively poor: 20-25% drop out annually. For undergraduates this average is sometimes 25-30%. For the institution as a whole, roughly 17-20% of registered students graduate each year. Approximately 70% pass courses each year. Accordingly, academic performance and learner outcomes require significant improvements.

Existing Technikon–Industry Linkages at Peninsula and Cape Technikon

The inclusion of industry representatives on the councils at both institutions, represent the central formal link between technikons and industry. Both technikons made an earnest commitment to promote, expand and strengthen links with industry through their co-operative education units. This commitment also extends to providing for the participation of co-op education representatives at a Senate level.

The organization of technikon-industry links occurs at several levels. At the most basic level, co-operative education units and academic departments are involved in experiential learning programs. This involves canvassing placement offers from sources in industry and linking placement officers and staff members to companies of different sizes. This largely excludes companies in the informal sector and small business organizations. Peninsula Technikon (2002) describes these activities as involving:

> *During the period that the students are with their employers, they work as regular employees or employees-in-training. Academic staff visit them to monitor their progress and to assess whether work and studies are complementing each other. Students are given a logbook for the purpose of recording progress achieved and work done. Their supervisor at the workplace monitors the regular reports written by the students and the employer. These reports form part of the students' academic record.*

A further key link between departments and industry centres around the activities of advisory bodies. Essentially advisory structures are viewed and described as evaluation bodies that comment on program design, student performance, industry needs and the match between training requirements and labour demand and supply.

Other structured links include those between academic department at the technikons and professional bodies (which include industry representatives). These play a role in programme accreditation and quality assurance. Essentially this involves monitoring of staff performance, establishing the degree to which technikons conform to external expectations and efforts to determine the quality of institutional outputs and to induce compliance with external expectations.

These linkages largely structure the processes and content that shape student learning within technikons. The type of learning and form in which linkages with industry is organized is determined by both internal and external policy orientations. For example, the present emphasis on learning outcomes is inter-linked with national policies in the labour and education arenas. The decentralized form through which these linkages are organized within technikons show key similarities with the changing form through which public delivery in government administration occurs. In each case, linkages involve a combination of bottom-up and top-down strategies but include efforts to devolve responsibilities to lower public administration support levels.

External links also exist with representatives from industry and are often structured to obtain research products and elicit the benefit of research, technological or managerial innovation. However, it appears that at both technikons, research acquisition and

exchange is given less emphasis in the links that have been developed. Both need to devote considerable future energy to improving research capacity and strengthening research ties with industry and the community.

Each technikon has further constructed important FET linkages with community organizations and appear intent on investing heavily in life-long learning and adult learning activities. Two motives stand out for this stance:

- To increase the total student enrolment, and
- To promote the image of technikons as institutions that contribute to community development.

While in the aggregate, technikons have performed admirably on both counts, the linkages with the broader community technically still centres around placement opportunities and not sufficiently on the exchange of programmes related to educational and service delivery. The latter represent key elements towards strengthening the linkages with the broader community. The investment in the growth of student enrolments and community development at each institution nonetheless forms a key component in efforts to contribute to the Western Cape regional economy. In form, it has involved establishing linkages with non-government organizations, community organization and offering training programs that improve work performance, job knowledge and individual skills.

One current means through which this can be promoted is through skills development and upgrading and by establishing delivery sites and programmes for SETAs, particularly those, which have regional bases in the Western Cape. Potentially, this can involve many different types of training: on-the-job-training; training for career advancement, training for pay increases; for mobility within companies, for improved productivity, for multi-tasking, job transfers, etc). In fact the evidence demonstrates that the Textile SETA and the Peninsula Technikon as well as the Metal and Engineering SETA and both technikons have developed linkages along these lines. Based on this, both technikons have in cases established and in other cases are in the process of establishing linkages with SETAs with the aim of supporting enterprises with the delivery of education and training programmes when these are required, thus contributing to the Skills Development Strategy in an indirect manner. SETAs of course provide financial reimbursements to companies where in-house training has been conducted and through other means where specific companies have experienced difficulties in doing so.

Regarding these areas, existing linkages with industry are varied. They range from personal and informal and non-statutory to structured and statutory. Some appear long lasting, others more impermanent. Mechanisms include advisory committees, liaison committees, NGO's, community organizations and links with and through professional associations. Of course there is also the cultivation of linkages with SETAs, particularly those that have become operational and active provincially. A range of associations have evolved from these initiatives. Some are with small and medium size enterprises; others exist with large and established companies. Some involve formal and traditional learners; others embrace non-traditional learners, while others focus on quality assurance and accreditation oversight. These bodies include professional associations and structures such as SGB's (Standards Generating Bodies),

QAP (Quality Assurance Panels) and activities of ETQAs (Education Training Quality Assurance bodies).

LINKAGE ISSUES AFFECTING TECHNIKONS

The following section of the report explores the organisational levels at which linkages have successfully been established between both technikons with various stakeholders but principally the segment referred to as 'industry'. The first of these that are scrutinised are the advisory committees, but the analysis provides reflections on linkages, which have acquired a distinct organisational format. These latter linkages take two forms: informal linkages which have been cultivated at the behest of individual effort and interest and linkages which are being propagated as a result of the changing policy milieu affecting education and training in South Africa. Sector Education Training Authorities (SETAs) are at the cutting-edge of this new policy instrument and higher education institutions such as technikons and universities are only beginning to come to terms with these. The technikons however are exhibiting a greater proclivity at constructively engaging with these. These cases of current policy making that is prone to the dynamic of constant shifts and changing modes nonetheless tends to surprise our preconceptions because there is a tendency to set new precedents through such processes around the formation of institutional linkages and relationships. The report attempts to document the unfolding process as accurately as possible but through doing so we are trying to comprehend what specific condition retard or advance industry-educational linkages.

Advisory/ Liaison Committees

As was indicated above, the advisory committees are not invested with decision-making authority. Advisory committees merely provide recommendations to the authorities within the governing structure of the technikons about issues embedded in the external environment but specifically the labour market. Ultimately this has a bearing on the curriculum and graduate outputs that emanate from the technikons.

Staff Views of Advisory Committees

Many of the staff members who were interviewed (17 out of 19) identified particular problems that tended to be associated with the way advisory committees functioned. The most important of these related to the low frequency of meetings and the difficulty of obtaining effective feedback from the advisory committees.

Meetings were viewed as occurring too infrequently and scheduling these to conform to the timetable of participants presented some difficulties. The impression given by some staff members was that advisory committee meetings were seen as merely routine. Other interviews with staff members indicated that advisory committees represented an important vehicle for facilitating student placements on job experience programmes, feeding into curriculum issues as well as providing a mechanism that filtered into issues of strategic planning. However the issue of linkages that extended into other institutional forums did not necessarily emerge from merely participating on the advisory committees. These functions appeared to be mediated by a wider set of relationships.

All the staff members interviewed at the two institutions maintained that feedback from the advisory committees to the institutions was vital and had to be undertaken

with greater regularity. They suggested too that information had to be exchanged between all members on the advisory committees. Among the suggestions for reform put by staff was for stronger coordinating structures and perhaps areas for regional forums to be established. Such suggestions however were premised on greater involvement and representation by senior institutional staff at such forums including strategic management rather than participation from lower level officials. Some staff members even pondered the difficulties of securing adequate representation from industry probing whether the general needs of industry were not being overtaken by the needs of specific firms and companies within a sector. It often appeared to be difficult to distinguish between the coalescence and representation of the myriad of interests on advisory committees and the overall interests of the sector for which graduates were being trained.

Notwithstanding the above, there was unevenness in the participation of representatives from industry generally on the advisory committees. It appeared that a small number of representatives, mainly with connections to professional associations and boards, had a greater strategic inclination to learner-centered activities but also exerted a louder voice over others. Overall it appears that the advisory committees are perceived to embody different functions. Some staff view it as being essential for addressing general issues. However there was unanimity that its focus should be refined so that it is more closely integrated into institutional activities. Finally, some staff even suggested the possibility of creating other types of feedback mechanisms to fill existing vacuums thereby increasing student awareness of the issues, which are central to an enterprise economy.

The significant changes that have occurred in the more recent period with respect to the changing composition of the student profile presents many challenges for the Technikons and their staff members. Perhaps, the following transcript from an interview conveys this meaning succinctly:

> '*Firstly you must remember that the profile of the student has changed so much over the years. The students who come here now have never been in touch with industry or engineering as mechanical engineering, and therefore we run in our daily program a slot for life skills. We prepare them for industry. We prepare them for interviews, CV writing skills, how to conduct themselves, ethics and things like that. Also, I personally have sessions with them, with the students to prepare them ……. I also talk to them and tell them what it's like; what is expected of them, what is expected of the company what their responsibilities are, and so on. Sometimes I even have students at my lectures who have been in industry to talk to the class and let them share their experiences. What I also do at the end of every semester, I get all the students who must to do oral presentations and I have it here at the Technikon for two days and invite the other students to come along and hear about the experiences of the students'.*

The interviews with staff members concerning the wider linkages that are built as a result of activity of advisory committees tends to obscure the operational activity of the advisory committees with its broader purpose. But even with respect to the broader purpose that advisory committees have, it appears that its role as signalling changes in the curriculum requirements of the labour market are often subsumed to a role as a facilitating agent of placements and internships at the workplace. It does not

appear that the staff member concerned are able to use advisory committees as a strategic instrument: instead the imperatives of having to support the placement of students overrides any strategic orientation which may be latent within these.

Employer Views of Advisory Committees[4]

Advisory/ Liaison Committees

A national training officer in a large national retail chain indicated that the liaison committees generally functioned as a vetting mechanism for forthcoming courses that were being presented by the institution. Business was represented in order to signal organizational changes and needs that companies were confronting which would impact on student training at the Technikons. The interviews emphasised the fact that the liaison committees did not have the power to influence curricula changes of specific subject offerings. It appears that impending changes to the curriculum were merely presented as outlines to the advisory committee. Employers did not appear to have a comprehensive idea about what technikons sought from the curriculum. They did however exhibit certainty about their own requirements.

Curricula changes from the experience of employer representatives on advisory committees appeared to take place at a relatively slow tempo, particularly in certain programme fields. It was further indicated that student involvement on such liaison committees would be an important factor to bring new ideas on board thus ensuring participation from the very direct beneficiaries to these initiatives. Another point raised was that the infrequency of liaison committee meetings made it cumbersome to keep abreast and follow through with implementation. At the Cape Technikon for instance, advisory committees for some subjects convened twice a year, whereas others convened once a year. Despite an unevenness in regular attendance at these meetings, the advisory committees often provided symbolic gestures to processes that were a lot more complicated to understand. Certainly, most members who participated on the advisory committees were of the opinion that they were able to make a contribution whereas those who did not participate regularly raised criticisms of follow-through as well as the periodic changes to the membership of the advisory committees. This in itself limited effective follow-through. In any event, lecturers were the ones who usually introduced motions for a change of content and these were often motivated by an attempt to incorporate global developments into the prevailing content of a course. One example of this taking place was an attempt to incorporate practical cases relating to globalisation and africanisation into the business management course. The course lecturers provided the motivation for this need, which they requested the advisory committee to vet.

At least two of the training officers interviewed allude directly to a problem of feedback to recommendations presented from the deliberations of the advisory committees. Addressing the unevenness in participation and the effectiveness at which report-back procedures on advisory committees takes place was viewed as an

[4] Five interviews were conducted with representatives of private business firms. The firms were located in the retail, chemical, textile and services sectors. The interviews were selected on the basis of participation by representatives from these firms, most of whom were linked to the personnel divisions of the companies that participated on advisory committees at either the Cape Technikon or the Peninsula Technikon.

important feature towards strengthening these bodies inn the future. It was essential for everyone of the advisory committee members to be kept up to speed and know what was happing. One even suggested that it may be opportune to consider some degree of student representation on the advisory committees to broaden the scope of influence by confronting members with the stark plight of students making the transition from education to employment.

But even when changes to the curriculum are approved and the advisory committees have been instrumental in promoting the changes, these revisions are limited by the conditions of registration of the Technikon as well as the quality assurance legislation governing these institutions, particularly through the Committee of Technikons Principals (CTP). These conditions predate the present higher education policy framework but are likely to be incorporated within its surveillance ambit. So the curriculum changes that are made have to be done to suit industry but these changes have to be within the parameters set by the Higher Education Quality Committee (HEQC). Recognition also has to be given to the fact that the employers who are party to the advisory committees represent a wide spectrum of industries. These can range from government departments, local government department, parastatals such as Eskom and Telkom as well as a more diverse representation from the private business sector. Each of these constituents in turn are part of settings which have unique regulatory criteria and notions of what core and essential standards are, even in fields that are marginal to their core operations. For the advisory committees to derive an opinion and put forward its recommendations means that it is therefore essential that compromises and consensus is reached. In fact one training manager praised the fact that advisory committees had been successfully constituted as forums at which representatives from the business community were able to meet each other to discuss issues of broader mutual concern, particularly among firms that were competing in the same industry. Previously, such employers would be reluctant about revealing their activities and specific problems to competitors. Problems with workforce training, labour supply and quality were kept out of each other's sight. The advisory or liaison committees served as a starting point to broader forms of collaboration even among competing business interests because the society wide and global issues affected them equally.

Some Concluding Remarks

A number of issues have been signalled in the interviews that have been conducted with the representatives from industry. These have great pertinence for strengthening the existing linkages that have been established between the two Technikons and industry in the Western Cape. An assortment of objections, have been levelled against the effectiveness of advisory committees. Apart from the frequency of meetings and the continuity of issues, which are brought before it, our overview suggests that its deliberations on curriculum matters are unable to bridge the needs of industry within the content of the curriculum.

Membership to the advisory committees, are largely drawn from representatives who are centrally involved with the issues of labour demand: business, labour and civil society. Labour and civil society organizations have first hand experience of the direct impact of excess demand and excess supply of labour. It is no irony for institutions of labour supply (particularly the technikons and the universities) to be

often accused for not linking up adequately and incorporating these interests within institutional forums. The problem that confronts the present configuration is that the advisory committees are allocating a higher proportion of effort to addressing operational issues, resulting in the strategic issues being ignored.

Other Organisational Forms of Industry-Technikon Linkages

Linkages between Technikon Staff and Industry

Staff at both institutions indicated that the links they had with industry was constantly growing. Some staff members did however indicate that the level at which these links were forged within the institution was often experienced as a problem. The reason for this was that the stronger links tended to be forged between academic staff members and those who occupied relatively lower levels of the occupational hierarchy in firms and these tended to be in small and medium sized companies. Consequently, the links between higher level staff in general and corporations in particular had not been adequately forged. Large companies were however beginning to recognize the advantages associated with cooperative forms of education. A remedy for this situation was seen to include senior academic staff and management staff so that the appropriate links could be forged with their counterparts in industry.

Many of the academic staff did indicated that it was a concern that the Technikons were not able to respond as rapidly to changing labour market needs. The major factors attributed to this shortcoming was the delay in implementing curriculum innovation and the relatively slow pace in affecting changes to national qualifications. While recognizing the necessity to respond flexibly to the demands of industry on a systemic scale, the sentiment expressed was that this was constrained by degrees of inflexibility at an institutional level, particularly in interpreting policies. For most staff the institutional inflexibility witnessed was out of tune with an external environment that was characterised by competitive practices and rapid change of the contemporary milieu. It meant that changes within the institution were taking inordinately long to implement. However, a contributing factor was the laborious and resource intensive process of managing curriculum change.

Further confirmation of curriculum linkages with industry was the close resemblance and in many cases a close match in the content of courses and programmes at both Technikons with the core foci in professional associations and bodies. Similarly, the professional bodies had played a key role with quality assurance obligations, which compelled them to remain alert to the labour market requirements of students and the labour demand needs of employers.

Labour Demand and Supply Problems

While the training manager in the retail sector alluded to a situation in the sector whereby firms were incessantly having to identify new sources of labour due to the rapid turnover of staff in particular occupational categories, the interviews also demonstrated the existence of labour oversupplies elsewhere. The labour supply problem featured prominently in the chemical industry, even though the over-supply corresponded to high-level technical and professional occupational positions. The particular retail company had devised a systematic training programme, which

spanned the occupational spectrum and included elementary as well as higher skilled workers. But even the existence of training programmes for cashiers and the prospect of further training for those willing to develop a career at the company was not entirely successful at inducing staff to remain within the employ of the company. Neither was it sufficient to have the reputation as a nationally based company at which employment tenure was more secure and employment conditions were generally better than at local general dealers. As a result the company indicated that most staff had an 'employee mentality' and the challenge was to identify staff who exhibited greater loyalty and intention to stay. It was therefore not uncommon for staff losses to be recorded after costs on training had been incurred, and this was a source of serious concern to the company. The sentiments expressed in the interview conducted above however tended to conflate training issues with labour relations issues. In terms of inter-firm competition for labour supplies, firms that do not invest sufficiently in employee training are likely to poach staff directly from enterprises that do. This example of market failure is a cogent reason for the introduction of general training levies on all firms. But on their own, levies and training programmes are not a guarantee to a stable workforce. A combination of conditions, including improved working conditions are necessary for this to occur.

In the chemical company on the other hand, the scenario was radically different. The interview was conducted with the head of the analytical chemistry division of the company. The company itself was a major supplier to the pharmaceutical industry and its major clients were based in South Africa as well as in North America and Europe. In order to service the overseas market the company is subject to rigorous regulatory guidelines which are tailored to conform with the supplier guidelines of the US Drug Administration. According to the respondent, there are roughly 950 standard operating procedures which have to be followed in the manufacture of various chemical compounds and raw materials. The particular division therefore employs largely analytical chemists and analytical technicians. The qualifications of the analytical chemists and other scientist employed at the plant ranges from MSc to Phd qualifications. Most of the analytical technicians who are employed at the company were trained at the firm to undertake specific laboratory work under strict supervision. However not all the technical staff had acquired a technical qualification before being employed but there are opportunities to do so through a generous study scheme. Consequently most of the technicians who had not yet acquired a national diploma or comparative qualification had commenced studying through either the Peninsula or the Cape Technikons. The company had a contractual arrangement with all staff members who were beneficiaries of a company subsidized study programme (the company finance all tuition and study material fees and provided study leave for those sitting for examinations) whereby two years of service had to be rendered to the company for each year of the academic qualification which was subsided by the firm. But while this process had been secured for the improvement of the qualifications of laboratory technicians, there was and is a relative oversupply of analytical chemists. The interviewee indicated that the firm does not experience problems hiring high level skilled staff because there was intense competition to secure a position at the company and therefore only those with the best qualifications and an appropriate match in experience were able to secure a post.

Therefore it is important to recognize that insofar as firms are the entity of analysis, the matching of demand and supply of skills has to be considered in relation to the

specific department or division of the particular firms about which analyses are being conducted. And while our analysis gives emphasis to the demand driven nature of skills development, our conceptions should not ignore the supply factors and the need to be sensitive to it, particularly in instances of over-supply. In the context of high demand in certain fields of the employment spectrum, why is there a persistence of over-supply elsewhere? Are the employers not transmitting this information to the education providers or is the labour market not doing so effectively? Who is not listening to whom?

Involvement of Business Sector Staff on Technikon Programmes

Some departments appear to have cultivated an ongoing relationship with previous students and alumni members of the institution. These links appear to have developed around content issues of the course that is offered but in some instances have been extended to include broader issues of professional practice. It is particularly prevalent in the fields around which these past students have become associated as practioners themselves. Sometimes these members are deployed as lobbyists within the professional body with which they are associated and tasked with promoting particular innovative ideas when necessary but also to test particular innovations which are being contemplated through a particular course offering at the Technikon. It is not uncommon for such members to be invited to present occasional lecturing duties at the Technikon as well: either as occasional speakers or as part-time lecturers. In this respect the particular training manager indicated that he had often been involved in making presentations on areas such as developing and presenting a curriculum vitae.

Social Investment Activities

Direct work experience programmes and initiatives are designed to enable participants to sharpen their requisite skills and get to know what the experience and expectations of the world of work involves. In addition, educational institutions do approach private sector enterprises occasionally for philanthropic support. Philanthropic support can be elicited to subsidize particular functions held by the educational institutions, such as graduation ceremonies. In many instances employers have obliged these requests. In the case of the retail company, one of the Technikons approached the company to donate a prize and a shield for the most promising final year student in Retail and Marketing, which the company agreed to support.

Evolution of Business Enterprises and Training Needs

Most of the respondents did however concede that the advisory committees had presented employers with a forum, which had not been available to them previously. And while it appeared that the Technikons had put great effort into establishing these forums, industry would have merely been comfortable with a narrow response in addressing specific concerns, which they were encountering. The existence of such forums was a challenge not to do so. One of the respondents from industry conceded that in the past employers were extremely guarded and secretive about disclosing information to each other. The opportunity however to participate on advisory committees however exposed them to a situation in which their particular problems were not unique to a specific industry or sector and enabled the exchange of ideas on methods of resolving them, which was not available in the past. It therefore was seen

by a few of the employer representatives as an advance, which had to be preserved in some way.

While industry education forums can contribute to new initiatives through which mutually beneficial linkages can be developed, weak or non-existent linkages can be an inducement to private sector organizations to start their own internal training programmes. Such inducements become more pressing when the traditional institutions of labour supply can provide resources in specific fields despite the demands for such human resource requirements being registered within the labour market. This feature is not as generalized within the South African milieu and private training providers often attempt to fill gaps by providing training in niche areas which cannot be undertaken adequately by public educational institutions. A similar feature has been observed in the United States:

> 'Since 1970, the Rand Corporation has offered a Ph.D. in policy analysis. The Wang Institute of Graduate Studies, established in 1979 by the Wang Corporation, offers a master's degree in software engineering. The College of Insurance, established in 1947 by the Insurance Society of New York, offers an M.B.A. and B.B.A. with a major in insurance, a B.S. in actuarial science, and an associate of arts degree in occupational studies. The Arthur D. Little Management Education Institute, established in 1964, offers an M.S. in administration and management. At least eighteen organizations have established accredited degree programs, which they offer to employees as well as to the public at large' (Powers, et al, 1988: 245)

The radically diverse and incessantly mutating character of enterprise structure and organization definitely sets a challenge for the content and orientation of linkages between higher education and industry to mirror and keep abreast of these developments. The challenge requires much more than being responsive, because responsiveness is often a reactive action to a processes over which there is relatively little control. The challenge from the technikons instead is to devise a strategy, which embodies planning, co-ordination and a clear time frame in which to attain the objectives elaborated through the strategy.

Society Wide Linkages involving Technikons

In a fundamental sense, the establishment of SETAs with powers that are greater than those accorded to previous institutions of intermediation of labour supply and demand functions has meant that the policy terrain has been deepened through a host of converging concerns. These concerns as was outlined at the beginning of the report, encompass the broader spectrum of higher education institutions becoming more responsive to the environment outside and beyond educational institutions. In recognising the importance of the communities that it supports, the institutions of educational provision or labour supply have had to demonstrate a responsiveness in the final instance to the labour market and the considerations which have been critical to it.

The technikon sector has for a longer period cultivated this linkage with the labour market, and in a more overt manner too. The existence of SETAs has however required new initiatives from higher education institutions, including technikons. Shifts in labour market demand trends can no longer be distilled directly from

concerned employers interspersed within a sector and sharing a common interest with the outputs of educational providers. SETAs are beginning to provide these inputs and beginning to systematise broad sectoral trends on the basis of systematic planning, effective coordination and scrutiny and evaluation. While these present major challenges for institutions of educational delivery (labour supply) to establish stronger working relationships with institutions of training intermediation, it opens up new opportunities and possibilities to contribute to the skills and training development process that has begun in South Africa. It is an opportunity to contribute to a new skills development and education and training revolution.

Sector Education Training Authorities (SETAs) Views of Linkages with Technikons[5]

The interviews with staff members at the five SETAs highlighted a wide variation in each of the sectors in which the SETAs were located. This variation is evident through the structure of the industries within the ambit of each particular SETA as well as through the immediate focus areas that have been adopted by each specific SETA.

SETA Organisation

In instances where there was an established institutional precursor to the present configuration of SETAs, and in this instance, the role of the industrial training boards have been pivotal, these organisational forms have been transmitted and conveyed into the current structure of existing SETAs. Four of the five SETAs appear to have had the historical advantage of starting on the foundations of industrial training board structures and capacities. These can be listed as the chemical SETA (CHIETA), the Textile SETA, the Manufacturing and Engineering SETA (MERSETA) and the Media, Advertising, Publishing, Printing and Packaging SETA (MAPPP). In the case of MERSETA, five former industrial training boards were consolidated to form the basis of the SETA. While the organisational and resource inheritance did not directly match the industrial and sector boundaries, which were included within the confines of particular SETAs, the resources which were transferred from the industrial training boards, mattered a great deal. The assets and obligations transferred involved a change in legal ownership and a subsequent shift in functions. All the assets and obligations of the industrial training boards were therefore incorporated into the new SETAs and were available to be used at the discretion of the SETA.

SETAs which were not preceded by the existence of industrial training boards, had to start afresh. But those SETAs that were established in relatively highly skilled, high technology and high capital intensive sectors with relatively large enterprise structures were not constrained or disadvantaged to any great degree by these developments. It appears that SETAs which could not be launched from the base of a dissolving industrial training board and were located in sectors that exhibited the opposite

[5] Interviews were conducted with individuals from five different SETAs. Four were face-to face-interviews (Textiles, Chemicals, Metal and Media, Advertising and Publishing) and one was a telephonic interview (Insurance). In addition to these, an interview was conducted with the assistant general secretary of a national trade union who is the chairman of the board of one of the five SETAs, the Clothing and Textile SETA.

structural attributes to the ones mentioned above, such as an amorphous workforce profile, lower technology and relatively lower capital intensity, with a wide dispersion in enterprise sizes was placed at a significant disadvantage. Strong leadership is manifest as an additional factor, which has contributed to the relatively strength and success of SETAs to carry out the functions of skills development, enterprise training and co-ordinating the linkage between the production and application of knowledge through institutions that have been assigned to it by the existing skills framework. The elements to good leadership appear to be invested in staff with a record of experience in enterprise organisations, in parastatal institutions and in the organised labour movement as well as in some public sector institutions.

However, there does not exist a technical recipe, which dictates the chances of success or failure of the leadership embodied within the SETAs. It appears though that where both the employer and trade union constituency have intervened to provide support and direction to the SETAs in addressing the challenges around skills development, a routine of clear objectives have rapidly been put on the agenda for action. While all of these initiatives may appear to conform as a direct imitation to the prescriptions of the legislation, there is a wide space for each of these institutions to develop new strategic initiatives and postulate manoeuvres that had not yet been contemplated but which are a response to peculiar necessities. This framework has certainly been the guide but each of the interviews depicted a situation were similar imperatives were leading to a diverse set of responses. Some of these were tailored in collaboration with particular educational institutions and Technikons in particular; some had done so with greater involvement of enterprises in the sector, while it appears from one of the interviews conducted that the SETA itself would steer the process: with or without the involvement of public higher educational institutions.

Enterprise Structure

It appears that the nature of the enterprises constituting a particular industry or sector within which a SETA operates has implications with respect to two critical issues. The first of these involves claims on the Skills Levy reserved for enterprises which have undertaken skills training. However, enterprises that contribute to the skills levy but make no claims on its results, would have their potential claims set aside by the SETAs for discretionary purposes. This provides the SETAs with an opportunity to explore linkages that have a particular training outcome, with specific higher education institutions and training providers. This can even take place for large companies that undertake training, particularly where their own training costs can never be recouped from returns on claims to the SETA, since the level of its own allocation to training is substantially higher. These companies would be placed in a position where the SETA can be bypassed. In either instance, where a vast number of enterprises have decided to adopt such a posture, these unclaimed amounts can accumulate to a sizeable portion. The Skills Levy Act by default therefore provides the SETA concerned with a significantly higher degree of resources than is actually allowed because 'non-claims' find its way into discretionary funds which the SETAs can spend for specific purposes.

The Textile SETA in particular has followed this route and makes greater use of its control over discretionary funds to establish relationships with educational and training institutions. Apart from doing so, it also uses its discretionary controls to

actively support small-scale enterprises, particularly in the clothing sector, not all of whom would be contributors to the skills levy. In contrast, other SETAs have proceeded either independently from the educational institutions as is the case of the Insurance SETA (INSETA). There may also be SETAs, which exhibit the divergence that appears to characterise the MAPPP SETA.

Closer Collaboration and Partnerships: Converging SETA/Technikon Interests

The view emanating from key informants and participants in the Textile SETA, is that Technikons are being postulated as vehicles for significant skills development activity. Consequently the Textile SETA has been active in developing Centres of Excellence at selected Technikons in particular provincial regions. The SETA subsequently transferred the entire assets dedicated to training that it inherited from the Clothing Industrial Training Board to an envisaged Centre for Excellence in Clothing Technology and Design at the Peninsula Technikon. This transfer involved machinery, equipment, computers and stock. Through its discretionary funding, the Textile SETA provides a grant or subsidy of R3 million per annum to the Centre for Excellence at the Peninsula Technikon (interview Mr Andre Kriel). This appears to be complemented by a government grant of R9 million to the Centre for Excellence. Similar arrangements have been organised by the Textile SETA with Technikons elsewhere in the country, and in particular with the Natal Technikon and the Wits Technikon. The Technikons where these partnership linkages are being developed are being conceived as a training and education hub, since the training, quality assurance and accreditation is being centralised and conducted from one venue in the province (Interview Ms Priscilla Davids). In addition to these, the SETA provides bursary support for students to attend courses over a three-year programme that qualifies them as technologists. The qualifications obtained are meant to be applicable to the high level labour demand needs of firms in the sector.

Apart from its links with the Technikons, which appear to be stronger than for those with the universities, the Textile SETA has nurtured linkages with both the universities of Cape Town and Natal to train members from the SETA sector to be skills trainers at enterprises in the sector. Students on these programmes are also supported through bursaries provided by the SETA. Furthermore the lack of quality assessors in the sector has encouraged the SETA to start an initiative with Rand Afrikaans University (RAU), to develop an assessor-training programme that is delivered through distance learning. In 2002, 45 assessors from factories throughout the sector have been enrolled on the programme. The RAU has assembled a broader suite of qualifications to which the assessor-training module can be appended. In fact, it will constitute a module in an ETDP diploma, which the University will eventually award on completion of prescribed modules.

Previous research by Bhorat and Lundall (2002) showed that the Textile industry had the lowest skills co-efficient, within the manufacturing sector. The skills coefficient merely provides a measure of the ratio between the total workforce and the number of skilled employees. The occupational categories taken to represent skilled employees include managerial, professional and technical staff. On the basis of these findings it is not surprising that the Textile SETA has put emphasis on increasing the skills composition of the SETA through channelling resources to this end by making an additional effort to command discretionary funds to this purpose. From the interviews

that we have conducted the impression that we were left with was that the initiatives to accelerate the skills profile of the sector has come largely at the behest of the actors in the industry and the Textile SETA. The interview with a representative from a large Textile manufacturing company confirmed that the training budgets for some companies are significantly higher and often by several factors higher than the amounts, which they are likely to obtain from the SETA when claims are rendered. But even for big companies where the amount spent by the company exceeds the amount that will be returned through the SETA, it still makes good business sense to submit the claim because the amounts that are returned can be used to finance important training needs at the enterprise such as adult basic education. The general sentiments expressed by both the employer and the SETA representative was that their industry was concerned about the type of graduate, which was emerging from the Technikons. Concern was raised about graduates not having enough practical experience and not having a holistic understanding of the way that factories function. These concerns were registered across a range of departments within an enterprise.

The large incidence of small enterprises particularly in the clothing sector has prompted the Textile SETA to make incursions into the SMME sector where unregistered sub-contracting operations is just as pervasive as formal sector operations (Interview Ms Priscilla Davids). Many of the SMMEs are located in the cut-make and trim (CTM) sector where they operate as sub-contractors to large retail enterprises and clothing chain stores. The intervention to support training in the SMME sector is done to address the heavy skewing of training that is taking place in predominantly formal sector enterprises. The Textile SETA has begun running pilot programmes around the development of supervisors, management development and machinist maintenance programmes. The training instructors deployed on the programme are paid by the SETA. It costs the employers nothing. But through the initiative more small-scale employers are beginning to recognise the value that is being added to their operations through the pilot programme. An example of this is the machinist maintenance programme. Many small-scale employers were faced with continuous production losses and had to attend to repairs on machines virtually every week. Using the SETA trainers, machinists at factories on pilot programme were taught how to replace broken needles and conduct regular maintenance checks on sewing machines. It led to a dramatic turn-around in machine idle time and significant improvements in productivity. The success of the programme has encouraged the SETA to start undertaking training around work-study methods and techniques. Now, the detailed example and elaboration is meant to demonstrate that initiatives such as these can be performed by the Textile SETA, in conjunction with students at a Technikon. This is particularly relevant for students who have difficulty securing job placement opportunities. It does not necessarily have to be in response to the above scenario, but the opportunity to think and devise creative interventions, which fits elegantly to specific labour demand requirements, has to be explored further. It is always useful when these begin along relatively informal boundaries. Over time such seamless boundaries will begin to resonate around more enduring relationships, linkages and partnerships.

Similar initiatives appear to be associated with the Manufacturing and Engineering SETA (MERSETA), and although the skills base it significantly different from the textile sector, discretionary funding is used to provide bursaries for learner technicians to attend Technikon programmes. Because MERSETA is the largest SETA in the

country, and caters for over 6000 employers, it has significant regional concentrations of activity. In fact there are ninety engineering students supported in this way in the Western Cape. These students generally span the FET band and to some extent are found in the HET band and the training and qualifications are generally in the fields of information technology, management and engineering. However the major issue for the SETA relates to providing support to employees in the sector around the recognition of prior learning (RPL) and providing programmes in adult basic education and training (interview with Janet Lopez). The activity around RPL is considered essential to provide previously qualified artisans with a platform to upgrade their qualification towards higher craft and technician skills. The more craft oriented skills include those such as the occupation of a millwright. It has elicited a rapid response from artisans to have their skills upgraded and be retrained in the particular field, but also in new fields that are being characterised by upward trends in labour demand.

Despite the Manufacturing and Engineering SETA embodying, in South African terms, some comparatively high skilled manufacturing sectors such as Electrical Machinery and Vehicle and Automotive Components (in contrast to Textiles) (See Bhorat and Lundall, 2002), employers tend to misunderstand the concept of ABET and have therefore not used it effectively to upgrade the lower echelons of the occupational ladder. Consequently only about 7% of firms within the SETA's ambit are engaged in providing ABET training.

Technikons too have been proactive in exploring to what extent relations with SETAs can be forged. Two examples that have involved the Cape Technikon can be used to illustrate this point. The first involves an agreement between the Graduate Centre for Management (GCM) at the Cape Technikon to provide training and educational support to learners from the Tourism, Hospitality and Sport Education and Training Authority (THETA) for a minimum period of five years. The GCM at the Cape Technikon is required to formulate curricula for programmes that meet the requirements of the relevant registered unit standards as well as match industry needs. The programmes cover all the sectors that are covered by the THETA SETA. These include: travel, tourism and hospitality; sport, recreation and leisure; gambling and lotteries; conservation, environment and heritage. The collaboration requires the technikon and its staff to develop learning material to cover all the above requirements. In addition to the requirements mentioned above, the technikon is required to provide means for the adequate delivery and assessment interventions to these. The relationship requires the institution to liase with industry in establishing learnerships. Successful graduates are to be supported with the required certificates and credentials at the end of each learning process.

Furthermore the Cape Technikon is gearing itself to serve as a registered training provider to support learnerships in the retail and wholesale industry. Steady progress has been made to secure agreements with specific employers in the retail and wholesale sector.

Independent Growth and Development: Autonomy with periodic linkages

If the case of the Textile SETA and the Manufacturing and Metal SETA can be used as exemplars of SETA driven collaboration and partnerships with Technikons and other education and training providers, the Insurance SETA can be used as an exemplar of relatively independent skills development. This is because the skills development initiatives that is spearheaded in INSETA, does not at present contain close collaboration and partnership with any of the major public higher education institutions in South Africa and Technikons in particular. INSETA has developed a specific learning strategy for the sector. This does not mean that the SETAs, which adhere to a similar trajectory, are loath to forge partnerships with outside educational and training institutions such as Technikons. It merely signifies how specific sectoral imperatives have intervened to create a condition where other players, predominantly corporate training providers, coupled with a developed internal capacity in the insurance industry is largely responsible for reproducing the skills needs of the sector. This perhaps is the major factor contributing to this particular configuration but it can change as the needs of the sector changes. This may be accelerated as firms in the insurance sector cater for niche markets outside South Africa, such as Francophone Africa for example. Here the sales and marketing orientation of new clientele bases would have to incorporate approaches, which are sensitive to new needs. The interview with INSETA indicated that the consulting firm, Price Waterhouse would be an important education and training service provider to the insurance industry.

Unlike other sectors in which SETAs have been established, the insurance industry, as a result of the occupational structure of the workforce, contains relatively few trade unions. It was pointed out that the Banking Union was generally the only trade union for the sector. Generally therefore, the initiative to develop a learning strategy within the sector was undertaken at the behest of the employers. Two areas where these activities were concentrated were for intermediate levels of the occupational hierarchy as well as customised programmes for specific segments of the management corps, including top management. Particular courses, which may be open to tendering from public training providers, could include for example courses on project management. But existing relationships with other technikons in the country had not yet been established. In any event, the industry has the internal capacity to offer training for many such courses but there may be a need for intermediate level courses that can be designed by technikons for incumbents who do not meet the minimum requirements set by the industry. Without having a definitive policy, it indicated that INSETA would be amenable to the idea of a tendering process in which the services of Technikons and other providers are marshalled for specific training purposes (interview, Dr Leatt).

SETAs that choose to adopt a similar orientation towards linkages with Technikons in the public sector are only likely to establish linkages with such institutions when confronted with training issues that are of secondary importance. Examples of these would be the provision of training to intermediate level employees or where there are constraints within the internal capacity of the sector (such as insurance for example), to provide training in niche areas. The fact that some SETAs are located on a trajectory of autonomous development because its core operational staff are drawn either from the highly skilled professional spectrum as in the case of actuaries, ICT specialists and managers or from a clerical and sales stratum means that the training

offered by Technikons can be bypassed. In any event, the existence of qualifications that can be awarded through established professional bodies such as the Society of Bankers and ancillary guild organisations for accountants, company secretaries and valuators implies too that the sector is not confronted with historical legacies of a highly under-qualified workforce. Where it is the case, the progression in certificating skills embodied within the labour force would have represented a significant milestone in opening access routes to those in the sector who are not adequately qualified. A sector such as the insurance sector therefore is not confronted with a major problem of low skills within its workforce: its problem is one in which the issues of representation are presented as a problem especially around equity in demographic representation.

Independence and Divergence

From all the interviews that have been conducted with the SETAs, the Media Advertising, Publishing, Printing and Packaging SETA appears to have chartered a course that runs independently from the spectrum of higher education institutions. In particular this course would be less dependent on support that can potentially emanate from such institutions: both universities and technikons. On the basis of sentiments expressed in the interview, this independent trajectory can lead to the SETA to establish divergent relationships with institutions of educational delivery, including the technikons. There may be other SETAs in a similar predicament.

The starting point of the position held by the MAPPP SETA is based on what has been described as an economic learning model. The interview, which was conducted with the CEO of the specific SETA, put strong emphasis on the need for institutional planners within universities and technikons to review their philosophical stance with respect to the creation and production of knowledge. Higher educational institutions no longer have the same monopoly over these facets and a range of ancillary institutions such as SETAs were beginning to be equipped to perform this role by supporting learning at workplaces that had the dynamic of contributing to new kinds of knowledge. Despite this fact, the universities and technikons still perceive facilitative institutions such as SETAs as being unequal partners in the production of knowledge. A line of thinking that emerged from the interviews and one towards which the MAPPP SETA is gravitating suggests that SETAs ought to open up spaces for development and contestation by challenging the system and its prevailing conceptions with new ideas, debates and proposals so as to form partnerships with higher education institutions on a mutually beneficial basis.

The higher educational institutions lagged behind with respect to the recognition and reproduction of emerging fields of knowledge and still subscribed to an outmoded model by which learners obtained qualifications for pre-determined positions on the labour market. This conception was labelled as viewing qualifications for 'position' and is not necessarily meeting the needs of the labour market. Consequently, learning in this more conventional sense had a huge concern about placing learners into structured places or 'silos' and this made it difficult to engineer new creative learning environments. In contrast, the changing dynamics of the labour market had led to learning being conceived in a radically different manner: the acquisition of qualifications were seen in relation to the 'purpose' for which they equipped learners for labour market requirements. The latter conception was postulated as being essential because it should contribute to an integration of learning with professional

practice. This would be achieved through creating seamless linkages between learning and creativity by means of the practice of work. In this way, new types of partnerships could be engineered and strengthened. The apparent segmentation and exclusion of institutions such as SETAs from being involved in the development and regulation of qualifications that were beyond levels 5 and 6 of the NQF band, was further viewed as an artificial barrier to SETAs such as MAPPP which cover a relatively high proportion of high skilled level employees. It appeared to secure the higher NQF level bands as the sole preserve of the higher educational institutions. But, it was difficult to comprehend what semblance these institutions bore with respect to the higher-level workplace training that was being entrusted to it. The argument was that these higher educational institutions were in some instances removed from a large part of the practices that were associated with these high level applications.

The relatively limited role that universities and technikons have had on the activities and concerns which the MAPPP SETA in particular has had to grapple with, such as research, generating unit standards and devising appropriate mechanisms of assessment has encouraged it to cultivate linkages elsewhere. The readily available funding that was open to it nonetheless meant that the MAPPP SETA could still proceed with it own skills development training programme. Some its linkages had been developed historically with overseas institutions. A dual certificate with the Massachusetts Institute of Technology (MIT) in the United States held the potential of becoming a full degree programme. For instance, historically through the mechanism of the Printing Industry Training Board an established linkage with the City and Guilds Institute of London goes back to 1991. These linkages were being explored further because some of the higher educational institutions in South Africa, had shown some reluctance about being involved in the development of learnerships. The SETA has also been experimenting with new modes and methods of instruction delivery, including distance learning supported by live content presentations. The fact that MAPPP has been successful at cultivating relationships with overseas higher qualifications awarding institutions and with only some based in South Africa is a disturbing trend. It suggests that relationships and linkages between SETAs and higher education institutions in South Africa, including technikons, is not a forgone conclusion. If there is a reluctance on the part of the institutions of educational provision to forge such linkages with SETAs, it should be realised that doing so is tantamount to forgoing potential sources of income and funding that SETAs have at their disposal and which are desperately required within the institutions of educational provision. Perhaps bolder leadership is require to strengthen relationships at a senior management level and build stronger linkages to mobilise resources and carry out the development work for skills renewal.

Some Concluding Remarks

From the evidence that has been assembled, it is clear that linkages between technikons and industry span a range of functional and operational levels. These functional and operational activities generally run parallel between institutions but are linked to reciprocal concerns between the bodies that are linked. Despite depending on the agency and commitment of dedicated champions to build and maintain these linkages, the choices to do so are often mediated by specific institutional imperatives. The imperatives that are exerted upon technikons in particular are concerned with a sustainable growth of the student population and the sustainable generation and flow

of financial and teaching resources. By highlighting benchmarks of best practice, the policy conditions and context often adds additional elements for consideration but these do not necessarily diverge from existing imperatives that already dictate the manoeuvre and responses from technikons.

New institutions such as SETAs, which are of fundamental importance to the skills development process, do not necessarily constitute a divergence to the above. The imperatives for linkages are often dictated by the functional responsibilities and regulatory conditions which institutions are required to uphold. What are lacking in the final instance are mechanisms whereby these imperatives can be systematised as a coordinated intervention and plan, whatever the conditions, be these routine, cyclical or unpredictable. The policy frameworks cannot do so alone. Many of the interviews have suggested the importance of holding annual regional forums to perform this function. It really amounts to a quest to manage the existing policies and multiple practices that occur simultaneously across institutions and serve as the vehicle to strategise and manage a longer-term human resource development trajectory. Such an instrument cannot be expected to perform this role merely on the basis of voluntarism or patriotism. It has to have statutory powers, be broadly stakeholder driven and be capable of mobilising resources for this purpose.

THE PRACTICE OF EXPERIENTIAL LEARNING

The idea of co-operative education constitutes an important part of the learning philosophy that is associated with technikons in South Africa. It a nutshell co-operative education refers to a symbiotic relationship, which exists between academics, students and industry. The relationship is maintained by combing the principles of theoretical knowledge with the practice of learning and confirming the basis of such theoretical knowledge through the lessons of application. It needs to be emphasised that a system of work experience placements that is divorced from processes of learning will be seen as a parody of experiential learning.

Student Views of Experiential Learning

Introduction

The interviews with students showed that the process of experiential learning led to range of experiences and learning outcomes: both positive and negative. Many of these sentiments were symptomatic of the complex dynamics, which are associated with the process of student placements for both the staff responsible for the process and the students, many of whom had no previous work experience. A number of factors shape the adequacy of the placement programmes. These include the level of resources, which can be mobilized to facilitate the process, staff experience from involvement with the placements as well as the relationship between academic staff and placement staff. The success of the process is predicated too on activities of companies that participate in accepting and placing students. Finally, in terms of the obligations placed on students, there are specified requirements, which have to be fulfilled for each course as well as learner outcomes that have to be met, while students are on placement programmes. Individual level factors such as student interest, the propensity of employer personnel to serve as mentors, the role of individual evaluators and student ability, competence, knowledge, habits and so forth are also important factors that contribute to the ultimate success of the process.

Organizing Placements

The placement of students at both Technikons typically happens during the third and final year of academic study. Normally this encompasses a student being placed on a job with a firm for a period ranging from three months to one year. Several factors determine the length of the job placement period. These include the type of skill the student is required to master, the industry and sector within which the placement has been scheduled to take place as well as the course regulations that have to be followed. Therefore the range of linkages that the technikons have cultivated with specific business sectors and industries remains important because these can be used to assist with locating appropriate placements for students. In most cases the process of experiential learning extends over the period of the placement, most of which are arranged for a fixed term. Occasionally, in a small number of cases, the period of placement is interrupted by organizational intrusions at the firm and course requirements, which students have to fulfill at the technikon.

Generally, placements are organized either through academic departments or through co-operative education departments or units. Each has its own advantages. When academic departments undertake the function, they are able to maintain closer contacts with students on placement programmes as well as with the personnel responsible for coordinating the placement at particular firms. Where the co-operative education department performs the task, greater resources and dedicated staff, are available to place students and help prepare them for the experience of work. Where this path is adopted, academic departments tend to refer their students to the co-operative education department. Doing so effectively implies that the placement function is outsourced from an academic department to a specialist department within the institution. Where there is a need to place a large number of students on work experience programmes, the latter option tends to be the preferred one.

Among the skills students require for successful placement is the ability to compile an appropriate curriculum vita and write letters of application to prospective employers. In addition, they need life-skills to conduct themselves adequately in interview situations such being able to respond appropriately to questions from employers. Presentation skills are also an important attribute, which employers will recognize and having these enable students to enter a work situation and meet the expectations of the position. The co-operative education departments usually require a substantial infrastructure and organizational capacity to undertake these tasks. It involves compiling and maintaining lists of suitable placement companies, communicating and advertising this information to the appropriate audience and setting up procedures to recruit willing companies and mentors. Ultimately the task requires matching a selection of candidates for positions on employment experience placements with those that are being offered by the respective companies. In cases where the departments undertake this task, similar considerations have to be made when considering the interests, which students exhibit and their motivation to be on particular placement programmes. Once the task of placements have been successfully accomplished, Technikon staff associated with the placement programme have to be geared to monitor student progress at placement locations. It requires that they maintain regular contact with the students and feedback from employers about the work habits, which students exhibit as well as their overall performance at the workplace. Part of this involves keeping logbooks, to monitor student activities. The process of monitoring and evaluation therefore constitute important functions. The specialist orientation of the process however favours a more systematic process. The evidence suggests that the co-operative education departments or units are the agents best endowed to institute the process.

Staff members in academic departments undertake similar evaluations. This evaluation, together with a student report, sometimes forms a key component in the overall assessment of student performance. The evaluation focuses both on work habits and learner outcomes. Practically, learners are expected to acquire a range of standard competencies during placements in order to gain first hand experience of work and be guided by mentors in the companies to which they are assigned. Evaluations are designed to embrace these features. More broadly, some staff also utilize this opportunity as a mechanism to obtain feedback about the quality of learners. It provides them too with a measure of deficiencies among employers as well as about the expectations that employers hold about technikon graduates and learners.

An analysis of student perceptions provides a useful insight into aspects of employment placement that are either functioning effectively or are in need of amendment on some fronts. This applies to both their criticism of placement programmes and endorsement of it.

Critical Responses from Students

In the interviews some students suggested that the achievements of students and the needs of employers appeared to be inappropriately matched. Some even went so far to suggest that no real matching or student selection had taken place and that students were merely placed at companies that worked in a related field and were offered some opportunities for experiential learning. In one instance, there was an expectation that in the absence of a placement, other employment would be found for the student. In another instance some students who were majoring in accountancy complained about being involved in placements where they were required to do auditing work. The auditing students however reported positively on their accountancy work experiences. From the interviews with students it appears that employers expected them to have had at least some work experience and have the ability to undertake certain specific job tasks.

In some instances students indicated that the companies at which they were placed lacked the systems and procedures to provide an adequate learning environment. In very few instances were students assigned to supervisors at the workplace. In fact several students complained that they were given supervisory functions to perform. Others indicated that multiple tasks associated with different workpeople were assigned to them. As a result, rather than receive support, students were expected to support subordinate staff in their activities. And they found this difficult to comprehend, more so, because it took the form of menial activities for which no real higher education study was perceived to be relevant. Therefore a tabulation of the points of dissonance that a large cross section of students from both Technikons raised about their placement experience appear to be related to:

- the absence of mentors;
- limited firm investment in training and by implication investment in the training of students on placement programmes;
- the expectation from many employers that training involves on-the-job-learning;
- finally the absence of human resource departments in small enterprises.

These ironically are some of the elements identified by employers which are seen as a disturbing absence among recent graduates that are emerging from the higher education system in South Africa. They merely corroborate what employers have been saying about the quality of graduates all along. The problem appears to be a lack of attributes that are embodied in graduates, particularly attributes which are necessary for them to enter the world of work and assume responsibilities that are expected of them. On the job learning is an important feature of the multi-tasked orientation which the new graduates ought to possess. The above sentiments illustrate very starkly that the many new graduates have unrealistic expectations about the world of work and so for instance the reality which small companies confront are that they do not have the resources to support separate human resource departments. The

sentiments are disturbing on the grounds that many cohorts of students holding them are demonstrating strong preferences about the viability of being associated with employment activities in small-scale enterprises. It suggests too that the entrepreneurial flair whereby new graduates seek opportunities in small scale and venture enterprises has not been adequately distilled. There do appear however to be very many valid points that students raised about the placement process which may require greater resources and systematic intervention to overcome. Among these was the fact that many students felt to have been inadequately prepared for the work experience process. Some students lacked the skills expected by employers. Others intimated that the curriculum was not adequately synchronized to cover the items, which were essential during the placement process: some of the course work was only covered after students had completed their placements and returned to the technikons. Furthermore, a number of students indicated that the duration of their placement period was too short to gain a proper impression about working life as well as being able to adjust adequately to the external expectations about learner outcomes. However, it is necessary to contrast the above sentiments with those students who were generally affirmed through the employment placement programmes and hence provided a positive endorsement of it.

Positive Experiences from Students

One of the positive outcomes from the placement experience which students appreciated was the introduction and exposure to the regimes of the workplace. Some students indicated that exposure to work detail, work procedures and the support of mentors provided them with a useful experience to the milieu of the workplace. Students who projected such an outlook from their placement experience were those who were generally associated with securing a placement at a large company and where a structured environment was the norm. Such students were exposed to preliminary discussions about the relative expectations stemming from the placements which they as well as the employers held. It was therefore a matter of routine for progress in the achievements registered by students to be monitored. Monitoring was complemented by some evaluation and where it was necessary, discussion of whatever obvious shortfalls prevailed with an indication of how these activities ought to be undertaken in the future.

A hallmark of the entire process was to challenge the presumptions of students by exposing them to exciting and new environments in which they were able to gain exposure and observe further opportunities for career advancement. The generally accepted workplace practices and particularly those which are widespread in large dynamic companies such as job diversity, multitasking, goal achievement (an element of management by objectives), coexisted with enabling students to appreciate a broadening and deepening of the skills that they already possessed. This unique experience reinforced the connections between the formal education at the technikon and the experience derived from the job placement process.

Some students perceived the placement process as an initial step to putting ‘a foot in the door’, but it provided a lens into how particular professions or vocations appear under closer scrutiny. Ultimately it provided these students with information that they needed to gauge from closer range what particular professions or vocations entailed and whether they had made the correct choices in following this path of study to a

particular career. In the words of some students it provided an indication about whether to: continue with the course selection, study further for an advanced national diploma or a technology degree or enter the labour market at the end of the three year diploma studies. Other students conceded that they had gained a better understanding of the aims and objectives of the course and programme through experiential learning. This reinforced the notion that the employment placement experience had made a positive impact to their subsequent studies.

Some Concluding Remarks

The fact that some students generally had negative experiences about the placement process should encourage the staff within the co-operative units to institute steps at containment or remediation of these objections. Negative experiences may arise either because the students have not been adequately prepared for the process or the enterprises at which the job experience placements are to take place have an incorrect understanding of the objectives that have been set from it. In both instances, shortcomings in the preparation and organisation of the job placement programme, has to be linked internally to the broader skills development initiative that is already underway nationally. In establishing industry-education links and the placement potential which flows from this, it is problematic when some of the parties to the process do not fully understand the objectives of the process: neither students, nor employers.

This is easier said than done. And the principal reason for this is that the agents within the Technikon may not be adequately resourced to carry out the process. Linkages of the sort that are being discussed requires an investment in human and information resources from those which are principally spearheading it.

Staff Views of Experiential Learning

Technikon staff generally recognise the wide variations in the student recruitment patterns, across sectors and within firms. The Cape Technikon staff indicate that because linkages between the co-operative education unit and specific academic departments are strong, it contributes to a rapid intake of students within these sectors. The levels of recruitment on work experience placement programmes at the Peninsula Technikon are not as high and were therefore estimated to be around about 60%. These lower recruitment figures mean that some students are not able to secure placements within companies. It was therefore of extreme importance for students from the Peninsula Technikon to be given further preparation in courses on life skills and entrepreneurial development so that their graduates exhibit a greater finesse when engaging with the labour market. Some staff members from the Cape Technikon do acknowledge that life skills are an important facet for managerial advancement at the workplace and that the unevenness of these skills among the student cohort is receiving attention within the institution.

Performance of Students on Job Placement Programmes

It was generally conceded that the issue of quality among the student cohort was a problem at both institutions. The Cape Technikon staff however suggested that the

expansion in student enrollment at the institution increased the need for greater student support. In fact, this unevenness was likely to impact on quality as well as the performance of students in the future. A key impediment, which staff had to contend with was language proficiency and comprehension which hampered the assessment of student learning. Yet, a definitive shift in the attitude, outlook and commitment to complete the academic component of their studies is discernible once students return from work placement programmes:

> *'When they come back I can see they've matured quite a bit. They then realise the importance of completing their studies. They need to have a diploma or B Tech degree. They also learn about the difficulties that workers experience at the work place and from an academic point of view. It assures them or it sort of verifies their theoretical knowledge. It gives them a chance to measure how good they know their theoretical knowledge compared to how to apply it in practice.'*

According to the staff members interviewed, some students experienced their employment placements as 'unappealing', 'boring', 'not challenging' and 'menial'. Many staff members at both institutions tend to evaluate the placement process in terms of their own involvement with it. Inevitably, as well as being time consuming, this involved considerable effort from staff members. For some, it also involved an additional administrative burden as the following statement illustrates:

> '*Promoting linkages requires a lot of organization if you want to be relevant and if you want to try and meet the needs of that particular group of people you are working with. It requires commitment, from the institution and from staff members to go beyond the normal hours of work, normal required input into a programme, and it really requires a passion for developing people. Without that you know, it can really become a very difficult concept to organize, but we've seen some huge successes of people who would normally not be able to study especially in rural communities as well.*

It appears thought that a range of ancillary attributes such as language, writing and attitudes to meet the challenges of the workplace are requisites to a successful experience of placement. These are often intangible and because they are hard to define we can dismiss them as being esoteric. Nonetheless they are critical human capital attributes, which are essential for graduates who are on the verge of entering a career in full-time employment.

Employer Views of Experiential Learning

Placements of Students

It appears that the practice whereby companies are given an opportunity to interact with students preparing to take up an assignment either through the route of a placement programme or as qualified graduates from the technikon institution embarking on a full-time career in employment, tends to favour companies that are scheduled to meet students the earliest. This is referred to as an open day for companies. The training officer at one company claimed that 'the best students are taken by companies who come first' to the open day event. Naturally this is not seen as a desirable situation but very little can be done about it. In fact this particular respondent went on to suggest that the Technikons had succumbed to a rhythm in which students would automatically be placed with particular employers because this

was an established tradition. The individual lamented the fact that there was no guarantee of the process continuing to function should there be personnel changes from the side of the firm. This was a shortcoming which could only be eliminated through a wider institutional arrangement and not merely through committed individuals who were dedicated to promoting student placements in industry and therefore held the responsibility of sustaining the relationship with the Technikon while they were around. It was suggested that Technikons required being more proactive to move beyond the current arrangements.

One way of doing so was to build a closer relationship with a large cohort of personnel managers from firms that operated in the sectors in which the fields of study that students embarked upon was more prevalent. This appears to be a useful suggestion that ought to be pursued through technikon cooperative education units. Through such means, the Technikons would 'keep us interested to place their students'. However this was merely one option among several and was likely to generate intermittent engagements by employers as the demand for longer term requirements changed. Technikons were implored to encourage its students to become active with part-time and vacation employment. Here a cohort of students from each Technikon could be linked to particular firms with the obligation of reciprocating through periodic casual work assignments on weekends and perhaps even daily after lectures have been taken. It could also be extended into the vacation periods, but more so at the end of the academic year, when many firms begin to gear down for a partial slowdown over the Christmas-New Year Period. This period would also be conducive for the temporary deployment of higher education students because many permanent employees in firms take their annual leave during this period. Such an initiative was seen as ideal for the longer term and was an important cog in the thinking within firms about securing potential management staff in the future. However it did not appear to the particular respondent that Technikons were keen about pursuing such a path, nor did Technikon students whom the particular manager was in contact provide convincing reasons why they themselves did not pursue it further. The particular firm was unambiguous in the emphasis given to having a long-term relationship both with the Technikons and with its students. It was viewed as being highly desired, but it required initiative and collaboration from the student and staff constitutency within technikons to become a reality.

One training officer was scathing about the network of communication which existed between the technikons and some of the departments responsible for establishing the bridgeheads for student placements with the employers. It concerned in particular the degree of follow up. She indicated that contacts for placements were submitted in a lackadaisical manner. An example of this was the late submission of curriculum vitas of the students that were earmarked for the placement. It was recommended that a lot more emphasis be placed on effective communication and all the role players ought to be substantially involved in the process substantially before it began.

In a different case, a training officer at another enterprise indicated that the feedback loop between the employer and the technikon, concerning the student who was on a job placement programme functioned on a fairly regularised schedule. Evaluation forms from the department where the student was placed was submitted to the co-operative advisor at the Technikon. It appeared that the placement in this instance occurred in the last few months of the second year of the three year diploma

programme and again in the first few months of the third year. The number of students selected for placement in the personnel/training division varied from year to year. But since 1999, eight students had been selected by the company to serve in this particular section. The precise numbers were: one student in 1999, two students in 2000, four students in 2001 and one student in 2002. In 2001, the entire cohort of students at the concern that were accepted from all higher educational institutions amounted to 89 students drawn predominantly from institutions in the Western Cape. Of this amount 32 were from the Cape Technikon and 41 from the Peninsula Technikon. A small number of students were also drawn from overseas institutions: namely the Universities of Fort Hare (Texas), University of Dortrecht (Germany), the University of Hamburg (Germany) and the University of Sydney. Compared to the 2001 intake, the overall intake in 2002 had been radically diminished to only 11 students. The reason for this was attributed to economic factors brought about by the uncertainty of restructuring that the company was gearing itself towards.

Performance on Job Placements

The placement programme required the training managers and supervisors of the students to provide the educational institutions whose students were being placed at the respective firms with an assessment report. The report is required for each respective student from the particular institution. Some firms keep very precise records of students on these placement programmes. The national training manager at the retail company was able to provide me with a synopsis of each student from a collection of passport photographs that were appended to a chart on the wall. And therefore in a general sense, he had a broad picture of the strengths and weaknesses of virtually every student and graduate. Not all were employment experience placements: some were graduates from institutions in the Western Cape and elsewhere in the country who had been selected as prospective candidates for management and staff development occupational categories in a wide spectrum of fields: marketing, accounting, retailing etc. It does appear however that the cohort constituting graduate placements were drawn throughout the country, whereas the cohort of students on the employment experience placement came essentially from the Western Cape.

The manager did observe however that students on the work experience programme were usually given assignments by the respective Technikons to complete as a credit while on the programme. On completion of the work experience placement, the students were required to submit the assignment to the course or subject convener at the Technikon for assessment and evaluation. Together with the assessment report submitted by the firm or company, the two assessments contribute to the overall course evaluation of the student. However, the training manager indicated that he believed that students on these placement programmes required to be given more projects while they were on the placement programme, by their course conveners at the Technikon. In this way, rigorous targets would be set and the placement programme itself would be viewed as a credible test, which instills the notion of learning through employment and represents it as a serious endeavour.

The above sentiment was borne out by a recently qualified graduate from the Cape Technikon who is employed in the personnel division of a performing arts company. Using her own experience, she indicated that students on work experience

programmes often lacked the skills that were taken for granted in a business milieu. A remedy was deemed to be greater exposure to the conditions that students would ultimately confront at the place of work. Though for this to occur, it was necessary to strengthen the preparation, which students required for completion of courses. Guides about what was to be expected were also perceived as being important. All of the above however had to be supported with follow-ups, which represented an important grounding technique about what to expect within the world of work. With this point of departure, the particular respondent argued that there were facets of the curriculum that were out of sink with the demands of practice within a particular occupational field at the workplace. For example, the respondent maintained that the curriculum and syllabus for the subject of personnel management required revision and possibly jettisoning. In particular instances, the generality of the curriculum may have contributed to this fate.

However, since most of the placement programmes were no longer than three months in duration and strictly functioned on the principle that graduates could not harbour expectations of being absorbed within the enterprise or firm at which the training was being undertaken, there were often limits set on what students could logically do during this period. The departmental structure of firms was a further limitation because it isolated monitoring from central coordination within the firm. This scenario appeared to be quite pervasive and was shown to exist in three different enterprises. In the service enterprises and the chemical firm, it appears that the predominance of departmental autonomy in each limited the scope to dictate the precise skills that those on placement programmes were meant to obtain.

A similar sentiment to the one above was repeated in an interview that was conducted with the training manager at the second services company. It was noted that the 1998/1999 students' cohort exhibited excellent qualities; but when a comparison was made with the 2000/2001 cohort, a definite decline in standards was observable. The particular features that were seen to be in need of improvement concerned the drive, determination, commitment, professionalism and ability to fit into the working world which was a trait that was absent in the more recent cohort. Lacking too were basic skills of writing and communication. From what was indicated in the interview, it was apparent that the students being referred to were from historically disadvantaged backgrounds. Within this context, the particular training manager did however suggest that an extension in the length of the placement period ought to be considered. So where the placement period in the second and third years normally lasted for three months, these limitations ought to be eliminated by extending the obligatory job placement programme from three to six months. It was suggested that half of this could be performed in the second year of study and the remainder in the final year.

For students on work placement programmes, placement is used as a basis of selecting future potential employees. Thus where an incumbent is unable to complete a course or successfully traverse the requirements of the practical training, these assumptions come to nought, and this implies that the process of targeting the appropriate match in the labour supply chain has to be initiated again from the start. Candidates who however demonstrate a disposition to proceeding further are those whom the firm is likely to entice by eliciting an application for employment. And so, the second criterion that is established to pronounce on quality of the graduate and perhaps pronounce on the quality of a specific institution is invoked. It is dependent on the

suitability of these respective entrants being absorbed as full-time employees into the staff of the firm. It is particularly apt for those who qualify for internal career track programmes designated for the development of the managerial corps. In fact, such selection processes provides an opportunity for internal candidates who have followed different learning pathways to compete for posts against graduates from either of the Technikons as well as other outsiders.

However in most cases and the sentiments were rather emphatic in both the retail, textile and chemical firms where interviews with conducted, was that graduates from either of the technikons in the province have a decided advantage over those candidates who were not able to obtain an opportunity to study full-time after leaving school. Of course external candidates are selected from a spectrum of higher and further education institutions and technikon graduates are required to compete with university graduates. Internal candidates tend to possess a different set of characteristics, which are valued by employers: these are work experience and maturity. In some instances particularly in the chemical firm, internal candidates have resorted to studying part-time for national technical diplomas and Bachelor of Technology degrees at both the Cape Technikon and the Peninsula Technikon.

Innovative Cases of Placement Programmes

Case 1

The Cape Town City Council, is an exemplar of a large company in the services sector that has devised an exchange programme which identifies lecturing staff from the Technikon to undertake a retraining placement within a specific departmental unit at the Cape Town City Council. This was first developed at the request of lecturing staff from the Cape Technikon and started in 1999. It enables lecturing staff to work on a voluntary basis at the City Council after teaching obligations have been carried out. In 2001 this process of enabling Technikon lecturing staff to reacquaint themselves with contemporary human management resource practice at the workplace amounted to a duration of one week. The plan is to extend this period of practical hands-on-exposure to three weeks in 2002. The interviews, which were conducted with staff members at the two Technikons, however did not reveal specific beneficiaries of the staff development process with the Cape Town City Council. It would have compromised the privacy of the individuals and the integrity of the informant to seek this information from the records of the City Council.

Case 2

The Shoprite Checkers group is a large national retail company that has diversified its operations into countries within the Southern African Development Community (SADC) region and has devised an extensive internal work experience programme for its staff members. This largely mirrors the scale of its business operations. Its entry into the regional retail market has required the company to develop an internal expertise in the sphere of standard internal accounting practices. The field is characterized by differential pricing mechanisms, which exist because of variable exchange rates as well as variable costing and price regimes.

Nationally between 300 and 350 employees are on a management development programme. Even in specialised fields such as accounting, the company has accreditation as a training provider for the practical component of the training. Through the extensive nature of the operations which the company undertakes, articleships in accounting practice are awarded to qualified university graduates who fulfill the minimum academic requirements for eligibility to write the board examinations of the South African Institute of Auditors and Chartered Accountants. The first chartered account to undertake articles through this specific route graduated from the final qualifying examinations of the Public Accountants' and Auditors' Board in 2001. In fact this success has drawn enquiries from articled clerks at established auditing firms and in the opinion of one who was successfully employed by Shoprite Checkers, the training provided by the retail company was significantly broader than that which was given at a large national auditing firm. The reason for this is that the retail company provides experience in the field of retail accounting which is emerging as a distinct area and is growing in sophistication. While being a detour from our discussion, the above conception lends itself to the idea that particular specialisms within higher education (e.g. research or the management of public institutions) can be conceived along these lines. But whether it can be translated with similar speed as exists in profit making institutions is a rather more difficult proposition.

Within Shoprite-Checkers, programmes with a focus of providing work experience training, exists for a number of occupational and functional categories of the management development programme. Thus articles are offered for those who will qualify as general accountants as well as those who are on a career track to become accounting technicians. The diversification that takes place in the training of large companies such as that described in the present case, is a reflection of the diversification and inter-penetration of the operations of the parent company. Such operations within the Shoprite-Checker Group, extend into other business sectors of the economy (e.g. property, rentals and finance).

While the respondent suggested that this was a pace-setting practice in the industry, it does not appear to be outside the grasp of competitor retail enterprises in the country. If this is the case, how pervasive is it within other economic sectors in the Western Cape and nationally and what opportunities does it present to the institutions of labour supply to be inserted within structured relationships of similar initiatives? The present research is not able to answer this question because the spectrum of insights from which our analysis is drawn is unfortunately not wide enough.

Some Concluding Remarks

The above section highlights the multiple dimensions through which the technikons and its substructures have become involved with experiential learning initiatives. Among the important pillars that has characterised experiential learning are job placements and internship programmes. These have been designed for its recipients to acquire and obtain employment experience. It appears that the traditional governing system within the technikon sector, as elaborate in the discussion of the policy context at the beginning to the report has borne a greater influence on this process, particularly since the pedagogic and vocational models have been invoked as an inspiration. The present policy milieu attempts to invest the technikon sector with

a wider rationale especially with respect to the promotion of experiential learning. Its tempo has accelerated, particularly since the notion of 'responsiveness' has acquired a wider prominence.

To some extent, this is a belated vindication of the intellectual philosophy and convictions that have been associated with technikon education. Organisations that have traditionally focused on core strengths, often to the neglect of other aspects of the training and skills repertoire are beginning to embrace the notion of 'learning organisations'. This is a relatively new phenomenon that is set to grow. The same appears to be happening to the society and the mantle of a 'learning society' is beginning to be promoted on a wider scale. However what must not be lost is that the placement process will loose its justification if the graduates that have passed through the process of placement and experiential learning are not able to breach the barriers of high unemployment and secure a job on the labour market. Placements come to nought if the core fields of study of those on placement programmes are in areas where there is a deficient demand on the labour market. There has to be sufficient linking structures and flows of information to ensure that the placements are in fields that justify and benefit from efforts at continuous learning.

CONCLUSION: THE ALIGNMENT OF LINKAGE AND PLACEMENT ISSUES

Problems Aligning Supply and Demand Considerations in the Development of Industry-Education Linkages

A critical element in developing and strengthening linkages between institutions of labour demand and institutions of labour supply relates to mechanisms of bridging a wide spectrum of institutions and bringing them to function coherently around a common objective. These bridging mechanisms are important because they dictate access to resources, information and through it, the parameters around which planning is exercised. From the supply side, both at an institutional level and at the level at which individuals are active, the technique of accessing funds for educational and training purposes has to be mediated through SETAs. Educational institutions, which have not developed such linkages, would therefore be unable to draw upon the resources, which are available to the SETAs, despite the importance of the programmes which are available in terms of relevance and quality. This absence can therefore retard inter-institutional and collaborative relationships between the SETAs and institutions of labour supply. And because of this, it has contributed to it emerging as a challenge to inter-institutional collaboration and partnership (interview Pundy Pillay). If the above problems are significant for the Gauteng hub, it would be more severe for provincial (regional) labour markets. Despite the necessity for strong linkages to be maintained by institutions of labour supply within these, the capacities embodied in SETAs would be severely dispersed and depleted at this level. So in the absence of steering taking place through the partners within SETAs, a different type of mechanism may be required to give the process momentum.

While conceding that SETAs have built-in sources of income, one respondent (interview Dr Leatt) signalled the importance of devising strategies, which would link the technikons and universities with the needs of SETAs and employers. A seamless strategy is required for this to occur, one whereby artificial boundaries are traversed and eliminated. But it has to take place by deploying collective resources to achieve the ends. A starting point was seen to be embodied in the idea of a annual forum or think tank in which the leading players of education and training supply and demand are drawn together. There may even be a need to replicate these collaborative forums on a regional basis.

The national and regional dynamics separating the powers, competences and responsibilities of national from provincial authorities are a difficult divide, which the universities and technikons are required to bridge. In terms of broader systems of planning, these institutions are oriented to national protocols and conditions, yet the labour markets, which they serve, stretches to varying degrees from the national to the provincial level. In terms of human resource development initiatives, provincial growth and development strategies have to be constantly incorporated and given recognition within the institutional plans that are devised.

It was suggested (interview Pundy Pillay) that the expectation for interventions around providing greater alignment, particularly between the educational and training institutions and the SETAs, ought to be steered by the Department of Labour. The provincial labour centres are perceived as the organ through which this will be carried out but there does not appear to be much evidence that it is taking place at present. Even at a more concrete level it has been difficult to devise a career or vocational counselling function which would intervene to direct labour market participants to resources that would enable them to expand on human capital acquisition. This is glaringly evident in the low priority given to the tertiary education sector in the provincial skills plan developed by the Western Cape provincial office of the Department of Labour (Department of Labour, 2001). But such a facility would serve as a foundation to a labour market information system, although it would require drawing upon capacities that are linking functions and responsibilities located in other government departments such as Education and Trade and Industry (or Economic Affairs within the provinces). The present system of bilateral dialogue involving either the government (Department of Education) and higher education institutions or the government (Department of Labour) and the SETAs or the higher education institutions with the SETAs has to be upgraded with a system of multi-lateral dialogue.

A host of respondents have signalled the need for such a process or forum being instituted. The type of institutional arrangement would require performing the function of networking but more importantly linking an array of labour demand, labour supply and intermediary institutions (e.g. SETAs and NGOs) to a common, non-partisan objective. NEDLAC to some degree can serve as an example of the type of institution that is being envisaged. Even the provincial government departments and ministries have representation at NEDLAC (e.g. Department of Labour, Department of Education and Department of Trade and Industry), so it does provide an important concrete example of the kinds of dialogue,which can feasibly be instituted. In the Western Cape, the Centre for Extended Learning, in an attempt to reconfigure specific provincial responsibilities of the South African Qualifications Authority (SAQA) is investigating the establishment of a brokering service that would enable public higher and further education institutions becoming more responsive to the education and training needs of the economy. This intention is to be able to respond to the training needs of firm directly on an individual basis or through professional bodies and associations as well as through the SETAs.

Such a forum or institution would have to crystallize diverse social and economic interests and conceptions on matters of economic planning. The social dimensions to the economic calculations would have to be perennially in the foreground and the very problems which are central to these, would be confronted by the institutions of labour supply. In a nutshell these are about labour market participation (employment versus unemployment and the various types of informality which are generated from these) and the quality of life as measured through standards of living and poverty. There would have to be sufficient consensus between the contending positions on such forums.

The relative inability of the respondents to draw a connection between a planning process that is affected through public representation and a similar one which is

underway through higher education institutions and SETAs, is probably because most view the process as a regional or institutional initiative that incorporates the capacities that are contained within the labour supply nexus. And while a range of different descriptions have been given to these (regional forums, regional workshops, think-tanks, convention etc.), the balance between a national event and a provincial orientation has to be tailored to provide effective information for implementation to take place through the institutions that are drawn into these deliberations. It would be an overt linking of the institutions of labour demand and labour supply and would be an important ingredient to systematizing the linkage process. But to avoid duplication, the initiative has to incorporate existing attempts to either bridge divides on the demand side as well as the supply side. Attempts to consolidate the labour demand and labour supply configuration has to bear this in mind and the coordination of existing information flows that educational providers have traditionally been constrained from obtaining would have to be overcome.

Two critical issues appear to be contained within the suggestions that have been made in the interview process. The first concerns aligning institutions so that they are configured to carry out the policy mandates and broad plans. It is best done by linking policy and planning systems to the institutions that are tasked with implementation. The second concerns providing an instrument, which would support the planning process, so that it can be strengthen. It applies particularly to the organization and collection of information. This is meant to complement and support the insights generated through the public participation process using forecasts about the present skills obsolescence and future labour requirements and job related needs. When information indicates that traditional artisan-type occupations has experienced a decline on the labour market, it means that curricula which continue to emphasise training in such fields requires some amendment and revision. The other extreme of completely jettisoning such programmes requires caution and control. A system of planning which is able to draw on both the dimension whereby the conditions for planning have legitimacy in terms of the social partners and agents as well as technical proficiency as depicted in the organization and co-ordination of information has a higher likelihood of achieving success.

Through such a forum, institutions of educational supply such as the two technikons would be in a position whereby strategic perspectives around economic planning, development planning, human resource planning and social planning could be used to advance the linkages and information flows for the technikon sector. It would provide both technikons with a more dynamic forum and barometer of development planning initiatives in the province. This has pertinence for the linkage as well as the experiential learning initiatives that have been discussed throughout the present report. The linkage itself could potentially provide concrete evidence of a model, which thus far has merely been signalled, as a postulate. With a forum, one can begin to theorise the desired linkages and facilitative mechanism that are likely to emerge from it by means of a continuing process of social dialogue.

The profound significance of the above case is that it can be replicated in every province within the country. More importantly, it provides a provincial organ in which national and provincial policies can be implemented through stakeholder driven participation that is not constrained by difficulties with its decentralisation into smaller and smaller substructures (e.g. regional districts and municipalities). This is

because governance and representation in the forum would take place through stakeholder institutions. As a starting point, if the forum includes all the public higher and further institutions into a forum or brokering network, it will enable these institutions to develop a more varied response to the signals obtained from the labour demand. Again, one needs to reiterate the concerns with issues of linkages and experiential learning to comprehend a vast possibility of opportunities that can be seized upon. The engagement requires relatively insignificant resources: the benefits will be infinite.

APPENDIX OF INTERVIEWS CONDUCTED

Technikon Staff Members

(Dean, Pretoria Technikon) Notes from interview conducted by Marcus Powell

Professor S. Bayat (Dean, Management, Cape Technikon)
Mr Chris Botha (Deputy Dean, Clothing Management and Fashion, Cape Technikon)
Ms Sharon Crafford (HOD Food and Consumer Science, Cape Technikon) – 25 April 2002
Mr Hannes Esterhuyse (Mechanical Engineering, Cape Technikon)
Ms Judy Favish (Director Institutional Planning and Transformation, Cape Technikon)
Mr Brian Forbes (Director Co-operative Education, Cape Technikon)
Ms Suna Fullard (HOD Graphic Design, Cape Technikon)
Mr Mel Hagen (Dean Built Environment and Design, Cape Technikon)
Professor Kok (Senior Vice Rector (Academic) Cape Technikon) – 21 June 2002
Mr William Lotter (Deputy Dean, Business Informatics, Cape Technikon)
Mr Joe Scalabrino (Building and Quantity Surveying, Cape Technikon) – 18 March 2002

Dr Harry Ballard (HOD Public Management and Law, Peninsula Technikon) – 14 March 2002
Ms Marianne Bester (HOD Clothing and Textile Technology, Peninsula Technikon) – 14 March 2002
Mr John Cloete (Liaison Officer Mechanical Engineering, Peninsula Technikon)
Mr Keith Jacobs (HOD Engineering, Peninsula Technikon) – 24 March 2002
Mr Greg Kakara (HOD Accounting, Peninsula Technikon)
Mr Jacques Petersen (HOD Chemical Engineering, Peninsula Technikon) 18 March 2002
Mr Adrian Strydom (HOD SETA Unit, Peninsula Technikon) – 11 March 2002
Mr Ivan van de Heever (HOD Marketing and Retail Business Management) – 23 March 2002

Technikon Students

Focus Group Interview (B Tech, Management Accounting, Cape Technikon)
Focus Group Interview (B Tech, Mechanical Engineering, Cape Technikon)
Focus Group Interview (B Tech, Public Management, Peninsula Technikon)
Focus Group Interview (B Tech, Marketing Management, Peninsula Technikon)
Focus Group Interview (B Tech, Chemical Engineering, Peninsula Technikon)

Representatives from Industry

Ms Lucille Bougaardt (Artscape) -
Mr John Haines (Shoprite Checkers) – 14 May 2002-08-01
Mr Fritz Le Roes (Cape Metropolitan Council) –
Ms Elizabeth Wunsch (Fine Chemicals Corporation) – 15 May 2002
Mr Alan Taylor (South African Nylon Spinners) – 17 May 2002

Representatives from the SETAs

Ms Priscilla Davids (Textile SETA) – 17 May 2002
Mr Andre Kriel (Chair of the Board, Textile SETA and Assistant General Secretary South African Clothing and Textile Workers Union) – 22 June 2002
Dr Leatt (Insurance SETA / INSETA) – 24 June 2002 (Telephonic interview)
Ms Janet Lopez (Manufacturing and Engineering SETA) – 22 May 2002
Ms Cheryl Pierce (Chemical SETA) 20 March 2002 (Conducted with Mr Ian Macun)
Dr Dave Thomas (MAPPP SETA) – 25 June 2002

Other Key Informants

Dr Laurine Platzky and Mr Nigel Gwynne-Evans (Department of Economic Affairs, Agriculture and Tourism Western Cape) – 25 July 2002
Dr Pundy Pillay (Resident Representative and Senior Economist, RTI South Africa) – 27 June 2002 (Telephonic Interview)
Mr Adrian Sayers (Provincial Development Council of the Western Cape)

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