



**FINAL REPORT OF THE REVIEW OF THE TELEMATIC
LEARNING PROGRAMMES AT THE POTCHEFSTROOM
UNIVERSITY OF CHRISTIAN HIGHER EDUCATION
(PUCHE)**

December 2001

CONTENTS

BACKGROUND TO THE REVIEW	1
THE CONTEXT	3
The use of technology supported learning approaches at Potchefstroom University for Christian Higher Education (PUCHE).....	3
<i>Moving to a flexible learning approach: a necessary change in emphasis</i>	4
Objectives of using Telematic Learning Systems technology supported learning at PUCHE.....	7
<i>The Development of the University's ICT Capability</i>	10
<i>The new Electronic Platform at PUCHE</i>	10
IMPLEMENTING FLEXIBLE LEARNING	12
Pedagogical implications	12
<i>Developing a Technology Plan</i>	14
<i>Planning for the Use of Learning Technologies in a Flexible Learning Environment</i>	14
THE REVIEW VISIT	15
Review of Telematic Learning Systems	15
<i>Overall assessment of TLS</i>	16
Learning Materials	16
<i>TLS Study Guides</i>	18
<i>Interactivity</i>	19
<i>Student responses to the study material</i>	19
<i>Materials Production</i>	20
Video Production	20
Graphics	21
The Quality Committee.....	21
Production Delays and Bottlenecks	22
Failure to deliver materials to students on time	23
<i>Student Support</i>	23
Facilitators	24
<i>Student Expectations</i>	25
Handling student queries and complaints	26
<i>Financial control</i>	27
TLS AND THE WIDER UNIVERSITY	28
<i>A comment on institutional structures</i>	29
APPENDIX 1	31
APPENDIX 2.....	33

FINAL REPORT OF THE REVIEW OF THE TELEMATIC LEARNING PROGRAMMES AT THE POTCHEFSTROOM UNIVERSITY OF CHRISTIAN HIGHER EDUCATION (PUCHE)

BACKGROUND TO THE REVIEW

1. In August 2001, on recommendation from Sir John Daniel, Assistant Director General (Education) at UNESCO and former Vice-Chancellor of the UK Open University, the Commonwealth of Learning (COL) situated in Vancouver, Canada was requested by the Chief Director of Telematic Learning Systems (TLS) of the Potchefstroom University for Christian Higher Education (PUCHE), South Africa, to establish a Panel of international experts in the field of technology-mediated distance and flexible education to undertake a review of the Telematic Learning Programmes¹ offered by the University.

2. COL has been invited by PUCHE to undertake a review of its Telematic Learning Programmes in order:
 - a. To provide an opportunity for PUCHE to demonstrate to internal and external stakeholders that it is meeting national needs and international standards for good practice in the development and delivery of courses and programmes through supported distance learning;

 - b. To promote continuous quality improvement in the Telematic Learning Programmes at PUCHE through participation in a process of peer review with international and local experts in the field and by the provision to the university of a detailed report giving advice and recommendations for future development and improvement.

¹ Telematic Learning Programmes are offered to students on and off campus (TLS Contact students) at 52 study centres where students (83% of the students of TLS) meet regularly under the guidance of a facilitator. A second group (TLS Distance students) live too far to attend these sessions and receive their support directly from the university (17% of TLS students). See table 1 to get a full picture of the distribution of all the students of the PUCHE.

Table 1: Educational Approaches

Educational approaches	FTE (enroll)	%	SUMMARY
Contact (Potch and Vaaltriangle)	9289.66	68%	Contact = 85%
TLS Contact	2293.36	17%	
TLS Distance	463.14	3%	Distance = 15%
Theology Distance	174.74	1%	
Education Distance	1517.23	11%	
Total	13738.13	100%	100%
Other Education	+/- 2668.92*		119.4%

*Headcount of other students in education: 9237.

Factor used to convert headcount students to FTE enrolment = x 0.2878

The University regarded the review as urgent in view its intention to embark with effect from 2002 on the phased introduction of a new outcomes-based, learner-centred approach, and the review of distance education offered by the contact institutions now underway in South Africa. In particular the University hoped that the review would demonstrate to internal and external stakeholders that the TLS programmes, designed mainly to deliver technology-supported contact education to students living at a distance from the main campus, were both contributing successfully to national educational and training needs, and conforming to international standards in the development and delivery of technology-supported learning programmes at programme and individual module level.

3. COL convened a Panel (see Box 1) under the Chairmanship of Professor Greville Rumble and the visit dates were confirmed for October 22-26, 2001. In preparation for the Panel visit, TLS provided COL with a self-evaluation document and supporting data. The Panel responded with a list of further questions on the basis of a preliminary study of the documentation received.

Box 1: The Panel Membership	
Professor Greville Rumble, PhD (Chair)	Independent consultant, formerly Professor of Distance Education Management at the UK Open University.
Ms Andrea Hope (Secretary)	Education Specialist, Higher Education, Commonwealth of Learning, Vancouver, Canada.
Dr Robert Thelkeld	Independent consultant, formerly Dean of Learning and Technology, California State University, USA.
Mrs Jannette Kirkwood	Head, Unit Team Services / Operations Manager <i>USQOnline</i> , University of Southern Queensland, Australia.
Dr R. Cassius Lubisi	School of Education, Training and Development, University of Natal, RSA.

4. The timetable of the visit is attached at Appendix 1. The schedule enabled Panel members to interview representatives of all of the key stakeholders in TLS including students of study centres on and off the campus, facilitators, central academic staff, and the senior management of the University.
5. Despite the disruptive effect of having a four-person Panel in the unit for a whole week, the staff of TLS Unit were always helpful and courteous to the Panel, and all additional documentation was provided without hesitation. The Panel wishes to

record its appreciation to the staff of the Unit, and to the University as a whole, for their unfailing help and cooperation in this regard.

6. The report which follows summarises the Panel's findings during the visit and includes recommendations for the University and for TLS in respect of the future development of technology supported learning at PUCHE. We have structured the report as follows:
 - ◆ A discussion of **the context** within which TLS operates, including the use of technology supported learning approaches at PUCHE (paras. 7-11), the desirability of making the transition from a dual-mode to a flexible learning approach (paras. 12-21), the aims/objectives of using technology supported learning (paras. 22-27), and the development of an ICT capability at the University (paras. 28-43).
 - ◆ A discussion of the implementation of flexible learning including the pedagogical implications of moving towards flexible learning (paras. 44-51), the need for a coordinated technology plan (para. 52) and the need to plan the implementation of flexible learning strategies across the University's academic programmes (paras. 53-58).
 - ◆ The Panel's report on the TLS Unit (paras. 59-116).
 - ◆ A comment on the relationship between the TLS unit and the wider University (paras. 117-130).

THE CONTEXT

The use of technology supported learning approaches at Potchefstroom University for Christian Higher Education (PUCHE)

7. PUCHE took the decision to develop a technology-supported extension programme in 1995. As with many such initiatives within campus-based university environments, the initial steps were taken by a particular faculty, and PUCHE gained the distinction of offering the first national BBA degree in 1995². The BBA was offered through the TLS mode – with English as the language of presentation. Following this, other faculties rapidly saw the benefits of developing for delivery technology supported contact programmes for delivery at study centres located at some distance from PUCHE's two main campuses. At the time of our visit in October 2001, 13 programmes were being delivered using the TLS approach. All are approved as official programmes and qualifications by the Department of Education of the Government of South Africa.
8. In our discussions with the University's authorities (Rector, Vice-Rectors, and Rector-elect), faculty authorities (Deans), academic and administrative staff, we found universal support for the technology supported learning programme at PUCHE. Everyone saw the programme as an important part of the University's

² The development of the BBA was done in collaboration with California State University.

overall mission. There was a widespread understanding of what we refer to as the extrinsic reasons for undertaking new modes of delivery – that is, those reasons appertaining to a University’s outreach and access functions.

9. Although some documents available to the Panel show that the University is seriously considering the implementation of flexible learning approaches on campus³, we found less overt understanding among the people we spoke to of the intrinsic reasons why a modern university should adopt a technology-based approach to teaching. By this, we mean the effect that the application of technology-based teaching approaches can have on pedagogy and learning.
10. When PUCHE originally launched its Telematic Learning Systems in 1996, it understood that this implied a transition into a ‘dual-mode university’, delivering on the one hand traditional contact-based programmes on campus, and on the other hand technology-supported contact learning programmes at the study centres (learning centres) remote from its two campuses. In essence, it would continue to teach students on-campus using traditional approaches, while using a range of technologies to carry media (print, audio, video, etc.) and support that enabled the University to reach out to an off-campus clientele. In this way it would be able to participate in the transformation of Higher Education in South Africa embarked upon in the mid-1990s, by contributing to the need for mass education, the promotion of lifelong learning and, improved access to university education to ensure that the student body reflects the demographic realities of the broader society, and by offering programmes that are responsive to social needs and the development of social responsibility.
11. In developing its dual -mode approach, PUCHE was following a path that many universities throughout the world took in the last quarter of the twentieth century.

Moving to a flexible learning approach: a necessary change in emphasis

12. The dominant model of the university has been and in some jurisdictions remains the traditional classroom-based model – although the significance of this model can be overstated: students at the higher education level have *always* been expected to do a great deal of their study on their own (i.e. independent learning) using the libraries of their institutions (i.e. resource-based learning) to ‘read’ for a degree.
13. In the latter years of the nineteenth century, however, universities (notably the land grant universities) in the USA (followed by those in Canada and Australia) began to use correspondence methods to reach out to students who were unable to attend campus-based classes. Many of these programmes were designed in such a way that direct physical contact between the student and the teacher was minimised (i.e. the programmes were offered at a distance), but others encouraged varying degrees of contact at local study centres, thus maintaining contact as a significant part of the overall provision⁴, while using the learning materials as a means of overcoming the

³ Potchefstroom University, Strategy and business plan for implementing the virtual aspects of flexible learning at PU vir CHO, March 2000.

⁴ This has of course been the case at PUCHE where, for the vast majority of the students served by TLS, contact has remained a major element of the services provided students. Indeed, the University’s

disadvantage suffered by remote students because of their inability to visit the library on campus.

14. This model of the university, as it had developed within so-called ‘dual-mode universities’ by the 1970s and 1980s, nevertheless implied a separation between the on- and off-campus wings of a university. However, this separation became increasingly unrealistic as universities adopted flexible learning approaches (sometimes sourced from outside the campus) aimed at (a) improving the teaching-learning system through a greater emphasis on the student’s own responsibility to manage his or her learning, and (b) achieving efficiencies. With the development of e-education and the wired campus, there has also been a behavioural change on the part of students, who expect their university teachers to make their course materials (module outlines, notes, readings, exercises, etc.) available on the Intranet. This in turn has encouraged students to study more on their own, at a time convenient to them, and also to expect to be able to study irrespective of where they live, accessing the campus network from remote terminals through the Internet. In effect, we are seeing the merging of distance and on-campus methodologies into a unified approach in which all students make use of learning materials and resources to study increasingly independently and more effectively within a flexible learning environment.
15. The development of flexible learning on campus is driven in part (as suggested in the previous paragraph) by student demand for ‘convenience education’, and in part by universities’ needs to drive down costs and release valuable academic staff time for other purposes. The latter is achieved largely by replacing the lecture with resource-based learning and supported independent study (in other words, with flexible learning). In the process universities adopting flexible learning approaches find that some of their students wish to study even more independently, at a distance from the campus. Universities also see opportunities to use the materials to serve the needs of those who can not attend campuses or study centres, and they are encouraged to do this because failure to do so means that they are not maximising the use of the learning resources that have been created for on-campus use. Any such failure involves a sub-optimization of the investment that has been made in flexible learning.
16. In such circumstances the concept of the dual-mode university, implying that what happens off-campus is somehow separable from what happens on-campus, both pedagogically and in terms of the modalities of teaching-learning, evaporates. In a very real sense the whole of the University becomes ‘distanced’ – using both media (print, audio, video) and concepts of independent or autonomous learning that were first used within a distance education context.
17. Of course, in the post-1990s context of emergent e-education, there are very real differences as universities begin to exploit the potential of on-line education. The media once carried by a range of separate technologies (text in books and study guides and on teletext, audio through audio-cassettes and radio, etc.) are now increasingly carried on a unified platform, the Personal Computer (PC), that is itself capable of doing much more by virtue of its power to store, calculate, simulate,

description of these students as ‘TLS contact students’ accurately describes their position as technology-supported contact learners.

communicate, etc. Whereas interactivity (postal, telephonic, limited face-to-face) had been problematic in early forms of distance education, in the newer ICT-based models of distance education it has become easy – often easier than in the campus-based setting where students can find it difficult to get in touch with their teachers and peers. Universities that had in the past never considered other models of delivery, have found themselves using approaches for their on-campus students that are easily translatable into teaching and learning strategies for non-campus-based students.

18. These developments are having a profound impact on the shape of universities. One can no longer draw a clear distinction between the on-campus and the distance university: both are using resource-based flexible learning approaches that place a high degree of responsibility on their students to manage their own learning independent of the teacher. The role of on-campus teachers is changing – they are becoming much more like the teachers found in distance teaching universities – who design technology-based learning strategies and the learning materials from which students learn, and who facilitate learning where necessary.
19. In these circumstances it becomes less and less sensible for governments to legislate, plan, and fund universities on the basis that there is a distinction between on-campus and distance education. Of course, there may be some physical face-to-face contact still on-campus, and none in a distance education programme, but even this apparent distinction is unreal: many distance education programmes have for years incorporated some face-to-face teaching at study centres, as TLS has done; and others are using technology, and particularly two-way individualised video conferencing, to enhance telephone conferencing, so that there is in reality and conceptually little difference between physical and electronically-mediated face-to-face discussion.
20. In the light of these developments we recommend:

Recommendation 1: That PUCHE embeds more fully the flexible learning model. The earlier dual-mode paradigm suggests that there is a real and divisible distinction between the approach to teaching/learning taken on- and off-campus, when in reality, and with the full implementation of flexible learning approaches on-campus, this distinction will effectively cease to be relevant.

Recommendation 2: That PUCHE vigorously argue its case with Government for no distinction to be made between its on- and off-campus programmes, on the grounds that such a distinction is misleading and will inhibit the University's ability to develop itself as a modern flexible university.
21. The application of technology supported learning approaches to on-campus operations will be the key factor in the development of a flexible learning university.

Objectives of using Telematic Learning Systems technology supported learning at PUCHE

22. Following from the 1995 decision of the Department of Education that residential universities were no longer required to restrict their recruitment of students to specific and defined geographical areas ('sites'), PUCHE, with the approval of the Department of Education, established its Telematic Learning Systems in 1996 to deliver approved programmes of study to students at various study centres in South Africa and elsewhere.
23. This initiative can be seen within the wider context of the development of universities and higher education systems worldwide. Higher education has for many years faced demands for more places engendered by:
 - ◆ Natural population growth
 - ◆ The emphasis on achieving higher participation rates among the population
 - ◆ The emphasis on enabling, through the use of distance and flexible learning modes, those sectors of society unable to attend campus-based universities to participate in higher education
 - ◆ The emphasis on providing lifelong learning opportunities – recognising that initial higher education cannot meet an individual's needs throughout their life.
24. In responding to these pressures, universities have adopted a range of strategies that have attempted to achieve several things:
 - ◆ Expansion/massification in size
 - ◆ Flexibility in delivery
 - ◆ Responsiveness to learner needs
 - ◆ Efficiencies of cost and operation
 - ◆ Enhanced effectiveness, both pedagogical and in terms of outcomes.
25. Strategies that have been adopted within universities to achieve these ends include the substitution of large group teaching for small group teaching (efficiency, expansion), the adoption of evening as well as day-time classes (flexibility, expansion), and the adoption of variously defined flexible, open and distance learning strategies. Cost cutting strategies – designed to achieve 'efficiencies' – have also played their part (for example, reductions in contact hours, assessment, etc.). Such changes have often been for the worse as small group teaching has been abandoned in favour of the large impersonal lecture. Given the acknowledged drawbacks of the large lecture as a means of either instructing students (passing on knowledge) or

facilitating learning, such developments have not helped standards improve. On the other hand, by retaining the traditional model, they have avoided the need for fundamental change. This is one reason why the traditional model of face-to-face teaching has survived so well.

26. The application of appropriate technologies to education has been the only approach to consistently deliver more benefits than disbenefits, enabling expansion/massification, efficiency, flexibility, and responsiveness to learner needs. Among the advantages derived from the use of the Telematics approach that we perceive in PUCHE are the following:

- ◆ The ability to serve new populations including mature entrants who were denied easy access to further academic programmes at the time when they matriculated from school for whatever reasons:
 - A lack of available places
 - Past barriers to access
 - People unable to study in a campus setting, for whatever reason
 - Domestic
 - Work-related
 - Personal (e.g. physical disabilities)
- ◆ The ability to overcome geographical and linguistic barriers to access of PUCHE modules and programmes, thus enabling PUCHE to serve the needs of:
 - Individuals, for whom PUCHE is one of a number of possible options, who wish to take a distance learning module through TLS
 - Persons remote from PUCHE who wish to take a programme offered by PUCHE
 - Populations outside South Africa
- ◆ The ability to support the development and availability of more efficient learning models for the face-to-face programmes on campus
- ◆ The ability to increase the size of the University, without incurring a proportionate increase in cost
- ◆ The ability to develop skilled human resources in particular areas of national need
- ◆ The ability to meet 'customer'/student demands for a more flexible educational system designed to meet their needs

- ◆ The ability (possibly at the margin) to earn monies from profits/royalties, either from the direct sale of learning materials, or from the sale of materials that have been co-produced with a commercial publisher or other tertiary institutions
- ◆ The ability to utilise learning materials developed for the TLS programme in the University's campus-based teaching programmes, thus releasing lecturer time for other purposes, including an enhanced role in the facilitation of student learning
- ◆ The ability to develop technology-based programmes that by their very nature emphasise independent learning and a constructivist learning philosophy – thus equipping both on- and off-campus students more fully to be lifelong independent learners.

Recommendation 3: We believe that PUCHE should continue to develop its TLS technology supported learning programme in areas where the University is strong *and* can serve identifiable market needs within South Africa and, where appropriate, elsewhere.

27. We wish to place this recommendation within a wider context. We are aware that the Government of South Africa was at the time of our visit considering focusing all distance education activity within a reconstituted UNISA (now redesignated the Open Learning University of South Africa). Our own experience of *single mode distance teaching universities* is that the curriculum provided by these institutions is generally less extensive than that provided by campus-based universities. This is because it takes a great deal more time, on the part of academics, to develop printed, video-, and computer-based learning materials, than it does to prepare a lecture, seminar, or audio-tape. As a result the curriculum is restricted not just because a particular distance teaching university does not teach certain subjects, but because the academic staff have not got the time to develop the same range of modules that their colleagues can develop within a class-based context. On the whole *dual-mode institutions* manage to get round this problem because they are able to capitalise on the curriculum that has been developed for delivery on-campus. This is particularly true of those systems which video-tape lectures for use in remote classrooms as in the case of the National Technological University in the U.S.A. Our view is that a rich and varied flexible curriculum is most likely to be achieved if campus-based universities are allowed to develop flexible learning programmes built around resource-based learning, and to deliver these to remote students. From a national point of view this would make use of the academic expertise that is distributed across the whole of the sector, to develop a range of modules to be available 'on the shelf'. The next step is to ensure that students can access appropriate courses. Distance education (which is one component of the flexible learning approaches now being developed by modern universities) enables students to study modules irrespective of geographical location. It follows that maximum flexibility and usage will arise if students registered at one institution are allowed to take modules offered by another institution towards their degree. Such collaborative arrangements are increasingly common, and would, we suggest, be of considerable benefit within the South African context.

The Development of the University's ICT Capability

28. We found that the development and application of Information and Communication Technologies (ICTs) was progressing in the University, though in a piecemeal fashion.
29. The intention is to convert PUCHE into a university incorporating flexible learning. As yet the University has not completed this transformation. The report of March 2000 *Strategy and business plan for implementing the virtual aspects of flexible learning at PU vir CHO*, indicates that the University has taken steps to put in place an electronic platform to enable this to happen, and we fully endorse this development.

The new Electronic Platform at PUCHE

30. The current electronic platform used for online course delivery has been developed by programming staff of Academic support Services over the past four years. ASS decided to create a local Learning Management System after reviewing a variety of commercial products, including Blackboard, WebCT and Top Class. The platform currently under development is called Alexander. Alexander, which will be launched in March 2002, appears to be an excellent product and has the potential for commercialization. All content is stored on databases. The system utilizes learning objects and is entirely IMS compatible.
31. One of the limitations for online instruction in South Africa is the tariffs for telephone usage, even within a local area. Therefore, Alexander is designed so that most work can be handled offline. Some TLS programmes (Pharmacology in particular) make good and cost/effective use of a combined online and CD-based learning environment.
32. A particular strength of this new software is the ability to do online authoring. This allows a faculty member to create text and graphics directly within the learning management system.
33. The University has done excellent work with the Alexander platform and should be commended for it.

Information Technology

34. The IT department (ITS) is the technology support unit for the campus. It includes computing, network infrastructure and telephone technology. The main work on the Alexander software has been undertaken through ITS in conjunction with a private vendor, IT3. The University has a 20% ownership in IT3. The director of ITS stated that this latest iteration of Alexander also links well to the student administration system, thus allowing students to have access to many University services. The

Panel sees exciting possibilities in this development for the future integration of TLS systems within the mainstream University administration.

Recommendation 4: The University should continue to develop its ICT capability with a view to transforming itself into a modern flexible learning university.

The Library

35. A key partner in the transformation of learning in higher education is the University library, which is required to transform itself into a technology-enabled information resources centre. From discussions with the library staff, the Panel gained the impression that the PUCHE library has not played a central role in the support of either module developers or students in the TLS initiative. This is comparable with the experiences of the relationships between libraries and mixed-mode open learning programmes elsewhere.
36. The Librarian and Deputy Librarian felt that the library's role in TLS had not been optimal due to the speed with which the whole TLS operation had evolved. They indicated that the library was not included as part of the development process of TLS. As a result, there were no specific demands on library resources in the development of TLS modules. Demands on library resources have largely been in the context of ordinary faculty operations, rather than in the context of TLS operations. We understand that this is an area where significant changes are in progress. These were not reflected in our discussions with Library staff.
37. The Librarian reported that non-book media remained a very small part of the library. This was despite a concerted effort to diversify media in the library in the past few years. Among the newly acquired resources at the library are web-based databases and related computer resources.
38. TLS students have a right to be supported by the library like any other student. While the University has made arrangements with other universities to permit students on its post-graduate TLS programmes to use their library facilities on-site, in general the undergraduate learning materials have been produced as a self-contained package including additional readings.
39. There is evidence of more direct support in the case of post-graduate students from outside Potchefstroom. These students are able to order books and journal articles from the library. In the case of journal articles, these are photocopied and sent to the TLS unit for dispatching. TLS bears the photocopying and dispatch costs.
40. In general, however, there are very few cases of TLS students outside the MBA programme requesting additional material from the library. This is attributed to the inclusion of reading materials in the self-contained packages.
41. Even in the MBA, there appears to have been a decline in requests for additional library materials, especially journal articles. In 1997, for instance, MBA students requested about 1000 journal articles. This number has declined to around 250 in 2001 (despite there being 950 MBA students overall, of whom 677 are TLS

students). About 2400 books have been sent to MBA students in 2001, but this includes MBA students who are not in TLS. This phenomenon may be due to an increase in access to information on the Internet.

42. The library does not mail books and journal articles to areas outside South Africa, even for postgraduate students. These students, however, have access to the web-based resources of the library.
43. In general, library administrators were very open to the idea of getting more involved in supporting TLS students.

Recommendation 5: We believe that the University's Library should explore the development of the Alexander system (see above) in order to provide all the University's students (both on- and off-campus), on a subject-by-subject basis, with the key readings they require.

IMPLEMENTING FLEXIBLE LEARNING

Pedagogical implications

44. Because each medium influences and changes the pedagogical structure, the decision to use technology-based teaching systems raises pedagogical issues, and these need to be addressed briefly.
45. Some of the technological options available – for example, remote classroom approaches, in which lectures are filmed or recorded for delivery to 'remote classrooms', tend to open up access without changing the basic classroom/lecture model. Yet even these media open up new pedagogic possibilities – arising from the ability to deliver video. The central medium is now the PC which has the ability to facilitate and increase:
 - ◆ Interactivity
 - ◆ Individualisation
 - ◆ Independent learning opportunities.
46. In effect a PC offers instruction, information, communication, collaboration, exploration, documentation, multimedia, text processing, illustration, simulation, and virtual reality opportunities. This richness means that learning does not have to consist merely of the reception of module content, but can become instead an active exploration of a subject by the students themselves.
47. As campuses become increasingly wired (and a University's reputation increasingly rests on its ability to provide all of its students with access to the learning possibilities of the PC and the Net), so changes are occurring in the way in which teaching and learning is conceived.

48. Although the PC makes these possibilities more obvious and much richer, print-, audio- and video-based education can still achieve these ends if it is coupled with changes in teacher-student interaction. Rather than see the teacher as the source of knowledge delivered 'ex cathedra' in the lecture hall and seminar room, the main medium of instruction becomes the printed, audio and video resources made available to the on-campus student. Students are expected to study these resources *before* they come to the class. The classroom then becomes a very different environment, in which the teacher leads and facilitates discussion by intelligently informed students. The actual time spent delivering information to students is reduced to the minimum. Instead, dialogue and discussion – arguably the most important aspect of a university – is encouraged. Students are helped to develop their thinking and to articulate their views – both essential qualities if they are to play a part in a vibrant and democratic society based on dialogue and the triumph of rational argument. And teachers will have much greater role in helping students to develop their thinking, and also in identifying for students where they are going wrong, and helping them to make progress in their subjects.
49. Thus approaches pioneered by distance educators of necessity are now, with the development of the PC as a pedagogic tool for on-campus learning, becoming the necessary pedagogical framework for the campus-based flexible university. Older approaches to teaching – the lecture – will have a place, particularly where the lecture is inspirational in nature, but this will be an increasingly rare event. Universities that do not change, that do not base their teaching around the new technologies, will also be failing their students, for they will be failing to equip their students with the two key skills of the future: the ability to thrive in the new electronic environments that the PC and the Net make possible; and the ability to develop themselves into autonomous, lifelong learners.
50. The pioneering work of the TLS unit in the use of educational technologies, the development of Alexander and the recent investment in upgrading the technology infrastructure on-campus have set the stage for the transformation of the University's teaching-learning system. The University is poised to exploit resource-based, independent learning approaches on- and off-campus.

Recommendation 6: We recommend that the University move rapidly to adopt a learner-based approach for all students irrespective of whether they are located on- or off-campus, utilising technology-based materials with high quality support to develop autonomous and constructivist learning approaches by its students.

Recommendation 7: As a consequence of this, we recommend that the University re-engineer its face-to-face teaching on campus to encourage dialogue and discussion around the work that students will have prepared prior to the class.

51. The changes on-campus will follow from the use of PCs and a wired ICT-based environment, but there will continue to be many off-campus students who are not in a position to own or even have access to a PC linked to the Internet and the University's Intranet. The University will therefore need to retain its existing earlier generation technology supported approaches in its Telematic Learning Programmes

(print, face-to-face teaching in study centres, video, etc.) to reach those students who are living at a distance from its campuses.

Recommendation 8: We recommend that the University should continue to use its existing Telematic Learning technology supported methods to meet the needs of those off-campus students who will be unable in the near future to access PCs and web-based educational opportunities.

Developing a Technology Plan

52. The development of an integrated ICT-based capability requires the University to address its technological needs and development in a co-ordinated way. This will involve planning for the use of ICTs as a means for delivering the curriculum both on- and off-campus. The ramifications for staffing, equipment, resources, training etc. will need to be considered. A useful source of reference in this regard is J. S. Daniel, "Mega-universities and Knowledge media: Technology strategies for Higher Education" (London, Kogan Page, 1996, ISBN 07494 2119 3).

Recommendation 9: The University should refine and implement its Technology Plan.

Planning for the Use of Learning Technologies in a Flexible Learning Environment

53. As in many universities, the use of ICTs at PUCHE has grown in pockets initiated by interest and/or need. A case in point is the LMS, Alexander. This product has a lot of potential, and has cost a significant amount to develop. Its place in the teaching and learning processes of the University, however, has not been made clear.
54. The optimum utilisation of the available technologies is dependent upon the University as a whole planning for future use of technologies. The decisions made in this area impact not only on teaching and learning, but also areas such as student administration, training of staff and students, student support systems, and hardware and software requirements.
55. The development of a Flexible Delivery Plan for PUCHE is seen as a necessary strategy in order for faculties and schools within the University to move forward in a united manner. The plan should address first and foremost the teaching and learning activities for the University's contact and off-campus students. The aim of a flexible delivery programme should be to enhance teaching and learning by incorporating flexible delivery methods within the University's academic programme.
56. These strategies should complement existing modes of delivery and enhance the educational value of the modules offered, with issues related to access of new technologies central to decision making. All University programmes should be considered from the point of view of student population, specific discipline needs and available technologies.
57. It is important that all sections of the University are involved in the development of this plan, although it may be efficient for each faculty to develop a proposal for their

modules and submit to a managing group. Once resource issues are considered, a prioritisation of developments may be necessary. From this plan, the function of elements such as Alexander should become apparent. The proposed use of this platform in 2002 to enable the entire intake of first year contact students to complete a compulsory computer literacy module is an exemplary use of the system, and further projects such as this are to be encouraged.

58. Development of staff in the flexible learning area should be addressed in the plan. Demonstrations of available technologies or complete courseware, e.g. pharmacology, or seminars on pedagogical aspects of learning technologies, will all assist in changing the teaching/learning culture.

Recommendation 10: The University should develop a Flexible Delivery Plan that addresses the teaching and learning activities for the University's contact and off-campus students, and the means by which the University will enhance teaching and learning by incorporating flexible delivery methods within the totality of its academic programmes.

THE REVIEW VISIT

Review of Telematic Learning Systems

59. The University established Unit for Telematic Learning Systems (TLS-U) as a service department to support the off-campus delivery of selected programmes. TLS-U has three essential functions:
- ◆ To facilitate the development and delivery of the learning materials used in these programmes
 - ◆ To develop and support a network of study centres (52 at the time of the Panel's visit) around the country (TLS (Contact)), and
 - ◆ To provide administrative and support services to TLS (Contact)) students as well as to students who live in remote areas (TLS (Distance))⁵.
60. In addition TLS-U also:
- ◆ Advises the University and its faculties on potential markets and needs that can be met through the development of programmes
 - ◆ Undertakes an R&D role in respect of the technology supported learning mode of delivery.
61. The Panel was informed by the University Management Committee that the defining features of TLS-U are that it:

⁵ The TLS (Contact) students are 17% and the TLS (Distance) students are 3% of the total number of students of PUCHE. See the attached table.

- ◆ gives priority to student support through the facilitators; and
- ◆ emphasises quality in the study materials.

Overall assessment of TLS

62. The Panel had been invited to review the operations of the TLS-U with a view to demonstrating to internal and external stakeholders whether the programmes are contributing successfully to meeting national needs and conform to international standards of good practice in the development and delivery of modules and programmes through technology supported learning; and through its recommendations to contribute to and promote continuous quality improvement in the programmes and the Telematic Learning Systems Unit (TLS-U).
63. Accordingly, in conducting its review, the Panel sought to probe for weaknesses in the TLS-U. What it found was a well-conceived system of developing and delivering technology supported learning programmes to a geographically dispersed student body. The Panel's overall conclusion was that the University as a whole, the faculties who devise the programmes, and the staff of TLS-U who are responsible for production, delivery, and student support, are to be congratulated on what has been achieved. There are some weaknesses that in our view need to be addressed, and we draw attention to these in the paragraphs that follow. There are also areas where non-essential improvements might be made, and again we draw attention to these.
64. From what we were told, we are aware that the system has not always worked as well as it does now. A residual blame culture persists in some areas – which is, we believe, regrettable given the steps that have been taken to improve the system.
65. Nevertheless our overall conclusion is that the system is sound, and our findings are positive. We believe that the TLS technology supported learning system within PUCHE is of considerable value to the University, to the students it serves, and to the wider higher education system within South Africa. Further, we believe that the TLS is a necessary and vital catalyst that will enable PUCHE to transform itself into a modern flexible learning university. It would be extremely regrettable if this resource and the service being rendered to students were to be lost, or if the impetus for change that has been started within PUCHE were to be arrested.
66. In the following paragraphs we provide detailed comments on what we found during our review.

Learning Materials

67. As noted above, the new constructivist learning paradigm has to be underpinned by well-designed, high quality learning materials which use appropriate technology.
68. In order to investigate the range of technologies used in TLS programmes, the Panel conducted a detailed review of the materials for three modules – in Financial Accounting (MBA), in Pharmacology, and the LLB (Legal Practice). The MBA is

presented in two modes – in a print/video version, and in print/video electronically on CD-ROMs. The LLB is presented only in print mode; the Pharmacology programme is offered exclusively via an electronic platform.

69. The materials for the MBA Financial Accounting consist of:

Print mode	Electronic mode
Study Guide – Compulsory element: basically wrap-around materials for the textbooks	Reproduced on CD-ROM – includes print for all 9 modules of MBA
Textbook – compulsory, either supplied by TLS through TSA or bought by the student	Textbook
6 videos (optional)	The 6 videos on 5 CD-ROM discs – just videos for this module
2 discussion videos, one presenting a case study for discussion (used in a mid-semester tutorial to be run by the Facilitator), the other a video that comments on major problems demonstrated by students in their assignments, and played at the second-to-last tutorial. Facilitators are given guidance notes on things to draw out. Students who do not attend the tutorials will not see this.	As for print version.

70. The LLB module consists of a module and 2 textbooks. There is no video as in the design of the programme it was decided the interactive study guides should be developed to be sufficient to support students in addition to the meetings at study centres with facilitators or in direct contact with lecturers. (We were told that although videos are popular with students, some lecturers do not wish to make English language videos because they are concerned about using English rather than Afrikaans. In this case professional presenters could be used.)

71. The Pharmacology programme is only available in online/CD-ROM format: there is an installation CD, another CD-ROM with materials, access to an online library, a reader of articles, and a textbook that is almost immediately out-of-date as soon as it is prescribed.

72. Students receive a study timetable which is built into their materials and which tells them what weeks to study certain materials, when assignment cut-off dates fall, and when there will be contact sessions. There is no reference in the study timetable to the fact that some contact sessions are designed as video-based sessions.

73. Materials are updated each year (and textbooks may be replaced with new editions). Print materials are printed to 60% of expected student demand as materials can be reprinted within 48 hours. Textbooks are ordered to meet estimated student demand.

It can be very difficult to get additional copies since some come from foreign publishers. It is also expensive where last minute airfreight has to be used.

TLS Study Guides

74. A sample of five study guides was reviewed in detail. Attention was paid to intended learning outcomes, self-assessment activities, and the extent to which the study guides promoted interactive learning.

Learning Outcomes

75. All the study guides we reviewed contained lists of intended learning outcomes. These outcomes varied in quantity and quality across different programmes and modules. In most cases the outcomes appeared modest and achievable. In one case the outcomes were less specific and demanded knowledge and skills that would normally be required of a professional who had completed an entire programme rather than a single module.
76. Each study guide is divided into several study units. Over and above the module outcomes, each study unit has its own set of intended outcomes. In most cases, the study unit outcomes closely correspond with the module outcomes. The Panel would caution that Learning Outcomes should be consistent with the content of modules and should be achievable within the specified study time. It should be recognised that a focus on outcomes may lead to the over-prescription of reading and excessive student workload. We would recommend that when materials are reviewed, care should be taken to advise students which are core and which are supplementary materials to avoid the danger of overload and the resulting demotivation of the learners.

Recommendation 11: When materials are reviewed, care should be taken to advise students which are core and which are supplementary materials to avoid the danger of overload and the resulting demotivation of the learners.

Recommendation 12: Learning Outcomes should be consistent with the content of modules and should be achievable within the specified study time.

Guidance on ways of learning

77. Each of the study guides has between half a page and one page of suggestions on how to study the module in general, and the study guide in particular. These suggestions range from how to read the study guide and work on self-assessment exercises, how to use video material, and maximising the use of study groups.
78. For each of the study units, there is a recommendation of the number of hours students should spend going through the unit and doing the necessary self-assessment exercises.

79. Given the pressure of time faced by the review team, it was not possible to conduct classroom observations that would have allowed us to make a judgement about the extent to which the suggestions for studying and other meta-cognitive issues were emphasised during sessions.

Interactivity

80. Self-assessment activities are the main mechanism for making the study guides interactive. There are a variety of activities across different modules. These include case studies, short paragraph application-type questions, recall questions, and even practical problems. While the PUCHE module writers developed some of the self-assessment activities, some were drawn from prescribed textbooks. This tended to be the case in business-related modules.
81. The interactivity is in some few cases undermined by the dominance of recall-type questions as self-assessment activities. This betrays a transmission mode of pedagogy underpinning the development of those particular modules.

Student responses to the study material

82. The Panel was given the opportunity to talk to a number of students, both those taking TLS modules as part of an off-campus technology supported learning programme, and one student taking a TLS module as an element of her part-time on-campus evening studies module. Generally the former liked the flexibility offered by the off-campus approach. In respect of the latter, it would be dangerous to extrapolate from the response of a single student, but the student involved, while preferring a traditional lecture-based on-campus approach, did indicate that she was often better prepared for the face-to-face sessions in the TLS module because she had done the reading beforehand. Moreover, she would welcome the ability to choose which modules she took on-campus and which through TLS, and in this respect would like both options to be available. Students whom the Panel met requested that materials should contain more examples for them to work through, particularly in the mathematics based subjects. They would also prefer that the videos should not reproduce the examples given in the study guide but provide further enrichment.
83. Despite the documentation provided to them, it also appeared to the Panel that some students did not understand the role of the discussion video. They saw it as desirable for preparation of assignments whereas its official purpose is to provide generalized feedback of the assignments.
84. Student feedback is an essential part of the TLS quality assurance mechanisms. Students acknowledged the trouble taken by TLS and central faculty to visit the study centres to canvas their opinion as well as the system of regular questionnaires, but felt that they in turn should receive feedback about what steps had been taken to improve things in the light of their input and that the lack of feedback discouraged them from taking the evaluation exercise too seriously.

Recommendation 13: As part of a general process of managing student expectations, students need to be made aware of the purpose of the discussion video.

Materials Production

The Academic Process Document

85. There is a detailed production process laid down, geared in the main to the production of materials/modules over an 18-month time period. It is the responsibility of TLS-U to make sure that the process is completed to schedule. The process is not always followed in cases where late hand over of module content occurs and the cycle has to be reduced to perhaps 5-6 months. For example, step 2.3 (preparation of a costing) may not happen. But two activities are always followed: Module writers are always given training, and modules are always put through the Quality Committee for approval. The Panel was given a copy of the Writers' Training Manual, which covers both design and process issues. As writing study guides becomes a campus-wide responsibility, the Panel recommends that more structured Staff development activities should be introduced to support staff in this initiative and ensure that the material fully reflects the University's commitment to the constructivist learning paradigm.
86. At present TLS-U produces 260 Telematic modules annually. The Panel noted that from 2002, when all on-campus modules will be supported by TLS-U produced study-guides, TLS-U and its partners in the development and production process will be required to handle 550-600 modules. It is evident that additional staff resources will be required in TLS-U and in the Study Materials and Production department to produce the required output and the Panel is concerned that steps need to be taken urgently to ensure that sufficient appropriately trained staff and space are made available to TLS-U for the purpose.

Recommendation 14: The Panel recommends that more structured Staff development activities should be introduced to support staff in this initiative and ensure that the material fully reflects the University's commitment to the constructivist learning paradigm.

Recommendation 15: Sufficient appropriately trained staff and space are made available to TLS-U to support the planned materials production levels.

Video Production

87. Academic Support Systems has a small and adequate video production facility, including sound and video editing equipment and a small studio with a permanent classroom-like set. Within the studio are four cameras: two floor cameras and two overhead document cameras. The production unit also has the ability to do remote shooting.
88. The facility produces two types of videos. In most modules there are four to six video programmes which students purchase as part of the total instructional package. Although TLS-U makes a point of saying that they try to avoid "talking head" videos, most videos feature the faculty member seated at a desk, talking to the camera. However, student interest is maintained through the use of several video inserts that have been developed from remote shooting.

89. Videos are totally scripted. ASS and the module developer develop the scripts jointly.
90. The video unit also produces facilitator videos, which are intended to be shown at contact sessions at study centres. These are produced throughout each semester and are designed to provide students with particular explanations and exercises. Content is developed from the general needs and problems identified through the grading of student assignments. From data gathered in discussion with students, it appears that they are happy with and appreciate the inclusion of videos as part of their modules.
91. The Panel members reviewed approximately ten minutes of a sample video. It appeared to have adequate production values for an instructional video.
92. Prior to TLS, there was only a single person involved in video production in PUCHE. The staff has grown significantly in the past few years, largely through funding provided from work from TLS programmes. Since the video production unit is expected to generate its own funding, without the TLS business the manager believes the production unit would probably not exist
93. In sum, the Panel feels that the video production facilities are quite adequate; that the products seem educationally sound, and that the relationship between the Video production unit and TLS-U is good.

Graphics

94. This section also has a good working relationship with TLS-U. A major concern to both areas is that the graphics section must generate its own funds. This causes problems of prioritisation of work internal or external to the University and subsequent delays in the completion of some TLS materials. Now that TLS-U has become a major client of the graphics section this issue should be addressed.
Recommendation 16: The prioritisation of TLS materials within the Graphics section needs to be addressed.

The Quality Committee

95. In the last 2 years, since the system was set up, no modules have been produced without the prior approval of the Quality Committee. This committee consists of the Head of Academic Support Services, the Instructor Designer who was responsible for the module, and an academic member of the faculty concerned who is not the module author. The Quality Committee has at times refused to approve all materials or sections of the materials making up a module. In the judgement of some of those we spoke to, some older modules still in presentation would probably not get Quality Committee approval now, were they to go through the QC system. The Panel applauds the University's commitment to quality manifested in this procedure but warns that time pressures may erode its usefulness and lead to a rather perfunctory

‘rubber-stamping’ response. As understanding of the new learning paradigm and acceptance of the convergence between on- and off-campus modes becomes more widespread throughout the University, one would wish to see Faculties take more responsibility for assuring both the quality of the content and the timeliness of its pre-production delivery.

Production Delays and Bottlenecks

96. The Panel found the Production process to be adequate though not leading edge. A number of causes were identified for production delays in the present system:
- ◆ Sometimes the Study Materials and Production unit is unaware that a module is being created which means that Instructional Design and other inputs can not be made until late in the day, and approval may then be withheld because of design faults
 - ◆ Academic writers may be overworked or fail to prioritise development in ways enabling them to keep to the schedule
 - ◆ The fact that there are only three Instructional Designers means that there have been delays between authors submitting their drafts, and the designers looking at them, in one case as long as three months. The target is a 5-working day turn-round. The Panel believes that the Instructional design capacity of the University needs to be strengthened by the appointment of additional staff. We recommend consideration of the appointment of an Educational Technology specialist to provide support/advice on the application of the latest technologies.
 - ◆ Insufficient graphic design staff are employed in the Study Materials and Production department to support design and production of the module production load
 - ◆ The Quality Committee may refuse to approve materials for production leading to delay
 - ◆ Academics are able to prescribe additional readings in mid-semester, requiring additional mailings.
 - ◆ The self-financing imperative of the Graphics Unit leads it to prioritise income-generating projects at the expense of TLS modules.
 - ◆ The printing process is labour intensive. It could be rationalized and streamlined. One suggestion in this regard would be for the printed study material to be delivered to the students in shrink-wrapped packages ready for insertion in the binders rather than being delivered ready for students’ use.
97. The Panel learned that in the current semester, a number of programmes had late materials requiring additional and costly mailings (though these costs were now passed back to the Schools in an effort to discourage late mailings). Students would

not necessarily know when they received the first mailing what was missing, nor when the missing elements were likely to come.

98. Late materials/mailings is perhaps the biggest service failure in this area. Resource shortages (staffing) appear to be the major impediment internally to solving the problem.

Recommendation 17: Steps need to be taken to address the causes of production delays, with a view to minimising them.

Failure to deliver materials to students on time

99. Materials distribution has been outsourced to Technikon SA (TSA) since the beginning of the 2001 academic year. For students who register on time, the current materials dispatch system works well. Nevertheless, the Panel established that even when the production process had been successfully completed to schedule, there were occasions when students and facilitators did not receive their materials before the semester began. Provided students registered by the registration cut-off date there was just time to get materials to them by the start date for the module, even in remote study centres where delivery takes from 8-10 days, unless the materials were textbooks where sufficient numbers were not in stock. However, many students register after the cut-off date – usually for financial reasons (late payment of fees) and the University allows this to happen, arguing that this maintains the openness of the system. In these circumstances it could be up to 4-6 weeks after the start of the module that materials were sent out.
100. As late delivery of materials is a major source of student and faculty complaint, TLS-U needs to find ways of managing student expectations in this regard. The Panel were told that TLS-U does advise students about registration timetables and the implications of the late delivery of materials on their study schedule and in many cases the late registration is of the student's own choice. Unless TLS-U takes a hard line on registration cut-off dates, or takes steps to re-engineer the time-consuming application and registration processes which feature multiple hand-offs between the applicant, TLS-U and the Faculty and which build in delays, this is likely to be an ongoing problem which they and their customers will have to live with.
101. The Panel noted that delivery problems caused by different factors were a feature of the early days of the TLS programmes. Since such problems are a major source of student complaints, they tend to be remembered by different stakeholder groups and to influence opinion about the TLS programmes long after they have been solved.

Recommendation 18: More emphasis should be placed on notifying students that a consequence of late registration will be the late delivery of materials, which in a paced system of study will cause them difficulties.

Student Support

102. TLS's student support system is the key factor which distinguishes the TLS learning model from many Distance Education programmes. In the model, the resource-based

interactive study guides provide the medium for content delivery, while 52 decentralized study centres countrywide and on campus (at Potchefstroom and the Vaal Triangle) provide an opportunity for students to meet together to watch interactive video presentations, have group discussions, write tests and submit assignments under the guidance of study centre-based subject specialist facilitators. All study centres are screened before being contracted for use to ensure that they meet TLS requirements in terms of teaching equipment, student safety and accessibility by public transport. A faculty member accompanied by a member of TLS staff visits the centres twice a year. The visit results in a comprehensive report with feedback to the Centre. The Panel endorses the importance of the provision of good study facilities in the continuing success of the programme and applauds TLS-U and the University for the concern for the quality of its provision reflected in the inspection visit procedures.

Facilitators

103. There appears to be no difficulty in recruiting qualified facilitators. Around 500 facilitators are currently employed in all of the TLS programmes. The Panel learned that facilitators are appointed based upon their qualifications and experience after scrutiny of CVs and telephone interviews. We believe that facilitators play a vital role in ensuring the success of the TLS student support model, and suggest that the University could do more to nurture and develop them as part of the University academic community. One suggestion would be to establish regional/telephone conference groupings of facilitators for the purpose of training and ongoing networking, sharing of good practice, mutual support etc. We note that in some programmes, the academic staff on the Potchefstroom campus also act as facilitators, and feel that this is a very useful way for them to keep in touch with the needs of the distance learners.
104. While facilitator appointments are a faculty responsibility, we are unsure whether there is required systematic ongoing contact between the facilitators appointed to a particular module and the responsible Academic Programme Manager, or whether facilitator management is seen as a TLS-U responsibility. We believe that it is desirable that a mentoring role for the academic programme manager should be built into the system.
105. Despite information provided by TLS-U, some first year students whom the Panel met did not clearly understand the role of the facilitator, and expected to be 'taught' i.e. lectured to by them. Nevertheless student feedback indicates that they perceive facilitators to be essential to their success and that they are much valued.
106. As facilitators themselves may also not be familiar with the new constructivist-learning paradigm, there is a specific need for facilitator training in the expectations of their role at different levels. This is particularly important in post-graduate programmes.
107. The Panel was informed that central academic staff rather than the facilitators mark students' assignments on the MBA. While the Panel noted that other MBA programmes in South Africa may use this model, it felt that it might undermine the

integrity of the PUCHE model of student support by detracting from facilitators' knowledge and understanding of individual students, undermining their status in students' eyes and prolonging turn-round times while increasing the work load of central academic staff. We understand that the decision to make marking a central academic responsibility was related to the wide variation in marks awarded by facilitators on the MBA programme in the past, but would suggest that the University investigate the training, monitoring and standardization mechanisms which are used in the UKOU and in the OUHK to overcome this problem with a view to reinstating the role of facilitators as markers of assignments.

108. Although some guidance is given to students in each unit on how to study, we believe this should not stand alone. There is a role for facilitators to help students to develop study skills and become autonomous learners. Special material may need to be developed to support them in this activity.

Recommendation 19: The University should nurture and develop facilitators as part of the University academic community. One possibility would be to establish regional/telephone conference groupings of facilitators for the purpose of enhancing training and ongoing networking, sharing of good practice, mutual support etc.

Recommendation 20: It is desirable that, in respect of facilitators, a mentoring role for the academic programme manager should be built into the system.

Recommendation 21: There is a specific need for facilitator training in the expectations of their role at different levels.

Recommendation 22: Ways should be developed to inform students comprehensively about what they can expect of a facilitator.

Recommendation 23: We suggest that the University consider whether it is necessary for central academic staff to mark the assignments of TLS contact students, or whether, with suitable moderating and standardization mechanisms, this task could be given to the facilitators.

Student Expectations

109. TLS identifies three distinct groups of students who may take their modules (see footnote 1). There are full time students on campus that may take TLS modules, learners (the majority of TLS students) who are attached to study centres and attend contact sessions, and remote students whose geographical isolation prevents them from attending any contact sessions at a study centre. It should be noted that, because of the need for a face-to-face element, the Nursing programme is available for contact sessions at study centres only. The Panel identified a sub-group of learners who fall between the last two groups. They are students who are assigned to a study centre but are taking modules where there is not a critical mass of students to justify the appointment of a facilitator for the particular module at that centre. In this case a study centre coordinator is employed to attend the scheduled contact sessions and play the video for the students. Students we spoke to who had experienced this

phenomenon felt that they were receiving an inferior service to those students who happened to be in more popular programmes or to live in more heavily populated areas. This is part of the larger issue of managing student expectations which needs to be addressed.

110. In the short term we would recommend that TLS needs to assure that students for whom the University cannot provide a facilitator at a particular study centre are informed that this is the case so that they can make an informed decision about whether to attend what will then become a video-supported study group or to elect to travel further to attend contact sessions at another centre. In the longer term we believe that TLS should investigate the provision of access to facilitator support through technological means (e.g. via audio or video-conferencing, or e-mail link at the study centre) for such learners. Although students can theoretically call the central academics to discuss their problems, in reality, the students whom the Panel met said that they did not feel so empowered.

Recommendation 24: There is an overall need to manage more effectively student expectations of what they will receive in the way of services from the University. This includes among other things (see references elsewhere) the circumstances in which they can expect to have a facilitator support their learning, and the circumstances where the only face-to-face support they will get will be from a module coordinator. The roles of both of these functionaries should be spelt out clearly as part of the initial orientation process.

Handling student queries and complaints

111. Managing the student/university interface is a key activity of TLS-U. It is handled by the Department of Academic Administration of TLS headed by a Deputy Director, Academic Administration who reports both to the Director of Academic Administration of the University and to the Chief Director of TLS-U. In this way, the procedures of TLS are kept in line with those of the central administration, and wherever possible, as in the case of examinations and fee payments, core processes are handled centrally. Four Administrative coordinators in TLS-U are responsible for coordinating all aspects of the academic administration of specified TLS programmes and providing administrative support to students “from application to graduation”.
112. Responsibility for responding to students’ queries and complaints rests with teams of advisors under the Administrative coordinators. If frontline TLS-U staff cannot deal with queries of an academic nature, they are referred to academic schools. Unfortunately there is at present no mechanism to trace whether such queries have been successfully resolved. This is clearly a potential source of tension between TLS-U and the Faculties. The Panel suggests that an Automated computer-based query tracking system such as the one used by Athabasca University in Canada could usefully be acquired and implemented to address this problem.
113. TLS-U prides itself on offering a one-stop back office service that is just a click or a call away from even the most remote student. Its ability to live up to its promise is compromised by the fact that the majority of the frontline advisory staff are employed on temporary contracts and are therefore subject to high staff turnover (5.7% per month in the period Sep 99 – Jun 01). Other constraints include lack of

space, leading to a poor working environment, limited access to training opportunities and lack of state of the art technological support. A major weakness in TLS procedures comes from an inability to track student telephone contacts. TLS-U has identified the need to install some form of customer relations software (CRM). However, the current telephone facilities are quite dated and could not accommodate CRM software. If the present switchboard were replaced, TLS could introduce an automated telephone enquiry service which could be used by students to seek answers to commonly asked questions on a 24 hour basis. The Panel learned that nothing is planned in this regard until at least 2003.

114. The TLS technology requirements also include access to networked printing and scanning facilities, an integrated fax server system, a good electronic document management system, and better web-based enquiries, registration and browser control facilities. Such facilities would in turn reduce the need for so much reliance on human resources. We were told that some of these facilities like networked printing and scanning facilities are already in use and an integrated fax server system will come into operation from the beginning of 2002.
115. Computing support to TLS-U is provided by ITS. It is currently assisting TLS-U to establish a new fax routing system to cut down on time and use of paper. Although ITS delivers a good service to TLS-U in maintenance of existing facilities, the Panel noted that ITS did not yet see its role as a proactive one with regard to TLS's needs. This is a problem because TLS-U wants and needs assistance in developing more efficient ways of applying technology to its operations

Recommendation 25: The University should give serious consideration to the needs of technology supported learning for TLS-U as it develops its Technology plan.

Recommendation 26: A mechanism that automatically records the receipt of student queries, where the queries have been sent for resolution, and whether or not they have been answered, is urgently needed.

Recommendation 27: TLS-U needs to be adequately resourced to support students in an appropriate way. In particular, there is a need for a much higher proportion of the staff to be on permanent contract.

Recommendation 28: Ideally when systems development resources can be made available, the current separation of TLS-U and Central student administrative systems will end and the two systems will be merged. The Panel are concerned however that the current excellent flexibility of response and awareness of the needs of off-campus learners that characterises TLS-U may be lost if this merger of systems were to take place before such redevelopment of systems has taken place.

Financial control

116. TLS-U in cooperation with staff in the Finance Department have developed a relatively simple financial forecasting model that enables the University and TLS-U

to model the effect on ‘profitability’ – both overall and in respect of individual programmes – of changes in student numbers, fees, and costs. This model is in the Panel’s opinion well constructed, and provides all parties with a useful planning tool.

TLS AND THE WIDER UNIVERSITY

117. The TLS-U personnel are a competent, hardworking and enthusiastic group. The Panel had evidence of an internalised quality culture in which ideas for improvement in services were solicited from staff at all levels and supported by the management. As part of the preparation for the review visit, the unit conducted a self-evaluation survey. The results were presented to the Panel during the visit and the Panel’s analysis is attached at Appendix 2.
118. The unit is well-managed and there is a good working atmosphere, notwithstanding physical discomforts created by an evident lack of space and the pressures created by an extremely heavy workload. The services offered are much valued by many students and staff. However, we share the view frequently expressed to us during the visit that one of the major difficulties in TLS-U is caused by its use of large numbers of temporary staff.
119. Both the University and TLS-U recognise the difficulty in delivering a consistent service caused by the inevitable high turnover of such staff. Faculties clearly recognise the problem and are sympathetic towards TLS-U but the turnover has a direct impact on the faculties and they rightly complain about the fact that the turnover of advisers can lead to the need to constantly re-induct new staff, particularly during times of severe operational pressure.
120. While we are very conscious that our brief was to investigate TLS-U and to advise on its future development, we are equally clear that it is impossible to discuss TLS-U staffing without reference to the wider University environment. We are very grateful to the University for facilitating our access to the senior management group and other key players on campus and for their frank responses to our questions during the review exercise.
121. One overriding theme has emerged throughout the visit. After seven years, notwithstanding the fact that the programme provides opportunities for the University to contribute to the massification of higher education, that it accounts for a large proportion of academic staff time, and that from 2002 campus-based students will also use similar study guides to TLS study guides, TLS continues to be referred to as if it had not yet established its credentials as an integral and permanent part of the University’s academic structure:
122. This insecurity might also be due to the uncertainty surrounding the implementation of the recommendations *National Plan on Higher Education* in relation to the provision of distance education. The consequences of this are that the University is reluctant to commit resources in terms of personnel and space. Programmes are selected for inclusion in the TLS portfolio on a voluntary basis by the School and Faculty concerned and not as a result of strategic planning on the part of the Management Committee.

123. In 1998 the Senate approved a policy that effectively committed the University to a flexible learning approach. If the University is really serious about the transformation from teaching to learning and participation in the e-revolution (and the March 2000 Strategy and business plan for implementing the virtual aspects of flexible learning at PUCHE suggest that it is) then it should begin to allocate resources towards these priorities. This must surely involve the institutionalisation of the expertise and resources currently residing in TLS-U.
124. The Panel wishes to make it clear that it is not suggesting the establishment of what we have heard described as a “third campus”, rather a transformation of teaching and learning at the two campuses at PUCHE and the Vaal Triangle using TLS as a catalyst for change. Failure to make this transformation will in effect mean that PUCHE would continue to be a University on the early 20th century model.

Recommendation 29: The University needs to establish the permanency of the technology supported learning model of TLS and address the problems caused in the TLS-U by the current high proportion of staff on temporary contracts. Permanent positions need to be established and existing staff transferred to such positions, in order to reduce the current high level of staff turnover suffered by the unit.

A comment on institutional structures

125. The TLS-U appears to the Panel to have the potential to act as a catalyst for the changes indicated above in the wider University context. As we have indicated, a major outcome of this would be a pedagogic revolution that would result in the adoption of autonomous and constructivist learning approaches across the University as a whole. This will require changes to the way in which academic staff approach teaching on-campus, and hence changes to the roles of academic staff. The latter would identify and, where appropriate, prepare learning materials for use by students, as well as facilitating student learning through the encouragement of a rich dialogic and constructivist environment around a learning system focused on technologies (particularly the computer and the Internet) and face-to-face interactive learning sessions.
126. We understand that the University intends to mainstream technology supported learning across all programmes. Had the application of this approach already been widespread, the Panel would undoubtedly have recommended structural changes that would result in the immediate and full integration of TLS-U’s production and administrative functions within central University structures.
127. Certain functions that are undertaken by TLS-U on behalf of off-campus students, and that have no counterpart in the on-campus programme, would still need to be done, of course, and their location determined.
128. However, on the basis of our visit, we have concluded that the University’s adoption of modern pedagogic practice is not yet fully complete and that the University’s existing structures and procedures are in a number of respects unfitted to support either the existing TLS-U (necessitating parallel systems) or to support the pedagogic

changes that we believe to be necessary. A major revamping of the University's current administrative systems, accompanied by an extensive staff development programme for both academic and administrative staff would be required to enable them to respond flexibly to the needs of flexible learners.

129. In these circumstances we came to the conclusion that pending completion of the transformation that has been embarked upon, TLS-U should remain structurally independent though, of course, linked to, the rest of the University's administrative functions.
130. We also concluded that the best interests of TLS-U and the University's technology-supported learning programme would be met by retaining the existing TLS-U structure while providing the human and technological resources to enable them to constantly improve their performance in providing services to students and to Faculties and Schools.

Recommendation 30: In the immediate term, and pending change in the University, there should be no major reorganisation of TLS-U.

PROPOSED PROGRAMME - COL VISIT (20 - 27 October 2001)

DATE	TIME	ACTIVITY	COL INVOLVEMENT	VENUE	HOST
Sat 20 Oct	07h25	Prof Rumble arrives	Prof Rumble (GR)	JHB International Airp	
	14h40	Prof Threlkeld arrives	Prof Threlkeld (BT)	JHB International Airp	
	15h45	Ms Kirkwood arrives	Ms Kirkwood (JK)	JHB International Airp	
		Dinner	GR, BT & JK	Bona-Bona	
		Overnight	GR, BT & JK	Bona-Bona	
Sun 21 Oct	07h25	Ms Hope arrives	Ms Hope (AH)	Bona-Bona	
		Game Drive & Lunch	GR, BT, JK & AH	Bona-Bona	
	21:15	Potch University Choir performance	GR, BT, JK & AH	Rector	
		Overnight	GR, BT, JK & AH	Venter Guesthouse	
Mon 22 Oct	07h45	Dr Lubisi arrives	Dr Lubisi (CL)	JHB International Airp	
	09h00 - 10h30	Meeting of Panel	All	TLS	Prof Lou & Mr le Roux
	10h30 - 11h00	Refreshments	All	TLS	Ms D Ackermann
	11h00- 13h00	TLS Presentation	All	Room 159	TLS
	13h00 - 14h30	Lunch	All	Room 147	Prof. Vijoen, Scott, Van Niekerk, CFC vd Walt, Rost, Zibi, van Wyk
	14h30 - 15h30	Meeting - Management of University	All	Board Room	Proff Albert, Van Niekerk, Zibi & Prof W Scott
	15h30	Leave for Vaal Triangle	All		Prof van Wyk & Mr le Roux
	17h00 - 18h45	Dinner	All	Vaalpukke	Prof Prinsloo (Vice-Rector)
	19h00	ACB121 contact sessions (8 students)	All	Vanderbijlpark	Prof van Wyk & Mr le Roux
	20:00	Return to Guesthouse	All	Venter Guesthouse	Mr le Roux
Tue 23 Oct	09h00 - 10h30	Focus on study material	BT, JK & CL	TLS	Ms Goosen (TLS)
	09h00 - 10h30	Academic Support Services	GR & AH	BAS	Dr van der Merwe, Mr Botha & Le Roux
	10h30 - 11h30	Library	GR & CL	Library	Mr Larney
	10h30 - 11h30	Electronic Platform	BT & JK	BAS	Mr Botha
	11h30 - 12h00	Public relations	GR, CL & AH	Public Relations	Mr Cloete
	11h30 - 12h30	Video Studio	BT & JK	Video Studio & Graphic Studio	Mr Geldenhuis & Ms Vreken
	12h30 - 13h00	Platinum Press	BT & JK	Cachet Park	Ms Goosen
	13h00 - 14h30	Lunch	All	Burgundy's	Ms Goosen & Ms Wernich
	14h30 - 15h00	Focus on Facilitators	All	TLS	Ms Wernich (TLS)
	15h00 - 16h00	Discussions with Facilitators	All	TLS	Prof I Nel, Mr Riekert, Ms Van Rooyen, Ms L Wernich
	16h00 - 18h00	Panel meeting	All	TLS	
	18h15	Leave for Klerksdorp	All	Klerksdorp	Mr Le Roux & Ms Wernich
	19h00	MCB223 contact session (5 students) (Klerksdorp)	All	Klerksdorp	Mr Le Roux & Ms Wernich
20h00	Return to Guesthouse	All	Venter Guesthouse	Mr le Roux	

Wed 24 Oct	09h00 - 9h45	Meeting with Programme Managers	BT, JK & CL	TLS	Proff Koen, Greeff, Bisschoff, van Rensburg & Dr Brink
	09h45 - 10h30	Meeting with Developers of study material	BT, JK & CL	TLS	Proff Koen, Bisschoff, Pretorius, Dr Brink, & Ms. Van Rooyen
	10h30 - 11h00	Refreshments	All	TLS	Ms D Ackermann
	11h00 - 12h00	Student Support Systems	GR, BT, JK & CL	TLS	Mr. Jan du Plooy
	12h00 - 13h00	TLS Research, Customer Relations	GR, BT, JK & CL	TLS	Ms A Bisschoff
	13h00 - 14h30	Lunch	All	Dros	Proff D de Klerk, & L van Wyk
	14h30 - 15h30	Economic & Management Sciences faculties	All	Prof Deon de Klerk	Proff de Klerk & Coetzee
	15h30 - 16h30	Meeting with facilitators on campus	All	TLS	Dr P Lourens & other lecturers
	16h30 - 17h15	Contact students	All	TLS	Mr Le Roux
	17h30 - 18h30	STB122 contact session (25 students) (Potchefstroom)	All	Potchefstroom	Mr le Roux
	20h00	Dinner	All	Veldpotjie	Prof L van Wyk
	21h00	Return to Guesthouse	All	Venter Guesthouse	
Thur 25 Oct	09h00 - 9h30	Supporting personnel	GR, BT, JK & CL	TLS	Mr Cato & dept heads
	09h30 - 11h00	Exam section	CL & AH	Exam section	Mr Laas
	09h30 - 11h00	Finance	GR	Finance Department	Ms Van Schalkwyk, de Villiers, Wernich & Mr Prinsloo
	09h30 - 11h00	Personnel Department	BT & JK	Personnel Department	Prof C van der Watt & Ms van der Merwe
	11h00 - 11h30	Team Meeting (refreshments)	All	TLS	Ms D Ackermann
	11h30 - 13h00	Information Technologies	BT & JK	Information Technologies	Mr Juyn
	13h00 - 14h30	Lunch	All		Prof C Reinecke (Rector)
	14h30 - 16h30	Meeting	All		Prof C Reinecke (Rector)
	16h30 - 17h00	System Administrator	BT & JK	TLS	Dr. Maarten Venter
	19h00	Dinner	All	La Provence Guesthouse	
	21h00	Return to Guesthouse	All	Venter Guesthouse	
Frid 26 Oct	09h00 - 13h00	Team Meeting	All	TLS	Mr Larney
	13h00 - 14h00	Lunch	All	TLS staff	Ms D Ackermann
	14h00 - 16h00	Report Session	All	TLS	Prof L van Wyk
	15h00	Dr Lubisi to depart for JHB International Airport	Dr Lubisi		
	18h00	Dinner (braai)	GR, BT, JK & AH	Prof L van Wyk	
	20h00	Return to Guesthouse	GR, BT, JK & AH	Venter Guesthouse	
Sat 27 Oct	12h00	Lunch	GR, BT, JK & AH	Fishmonger	
	13h30	Ms Kirkwood departs	Ms Kirkwood	JHB International Airp	
		Prof Threlkeld departs	Prof Threlkeld	JHB International Airp	
		Prof Rumble departs	Prof Rumble	JHB International Airp	
Sun 28 Oct	09h00	Ms Hope departs	Ms Hope	JHB International Airp	

TLS SELF EVALUATION

As part of its preparation for the Commonwealth of Learning visit, TLS undertook a series of surveys and focus groups with persons involved with the organization. The research process was modeled on one currently being used throughout the campus generally. Professor Van Wyk created a series of questions related to the following topics:

- ◆ External Environment,
- ◆ Internal Environment,
- ◆ Inputs,
- ◆ Quality Assurance, and
- ◆ Output.

The questions were submitted for review and comment to the Rector, TLS staff, and some additional university staff. Surveys were sent to students, PUCHE staff, TLS staff and facilitators. The survey process was the same for all groups, although the communication methods varied depending on the respondent's location. Each person received a copy of the survey in which they were asked to respond to series of affirmative statements such as "TLS is well designed to facilitate internal collaboration in higher education". They scored the statement as to their level of agreement on a four-point scale.

Once completed, the questionnaires were sent or given back to TLS. Three facilitators selected from university staff then either brought groups of respondents together in person or held telephone conferences with them. In the small groups the facilitators attempted to reach consensus on ratings. Facilitators also provided a summary of the discussions.

The team was given both raw and condensed data, including total scores as well as frequencies for each group surveyed. It is important to note that the data from this process are not of scholarly research quality. The process of respondent selection, use of locally selected group facilitators, and developing collaborative respondent ratings contaminates any possibility of statistical analysis. That said, TLS is to be congratulated for its efforts to do an internal evaluation from both internal and external stakeholders. The data provide a useful, if general, perception of TLS. That perception is largely positive, with more than 75% of all respondents rating elements of the program positively (i.e. "agree" or "strongly agree") in all questions among all respondents.

The following are some highlights of the data:

PUCHE Personnel

Thirty-three PUCHE staff members were requested to fill out the questionnaire. These were roughly split between senior administration, lecturers, and support personnel. Of this number, 15 attended the focus group discussion session at which time each question was discussed and attempts were made to reach clarification on ratings.

Overall, consensual ratings were quite positive except in the following areas:

- Organizational approach
- Resources
- Academic quality
- Supply of study materials
- Feedback

Although it is unclear from the information provided as to why the above five were rated lower, it appears that respondents felt that personnel were overworked and had a high turnover rate plus some felt coordination and logistics were less than optimal.

Facilitators

It was reported that 10 facilitators completed the questionnaire and were later brought together (presumably by telephone conference) to develop consensual ratings. Some of the facilitators were on-campus lecturers who also sometimes functioned in the facilitating role.

After group discussion, group scores were all positive, either “agree” or “strongly agree”. However, from summaries of the group discussions, it is clear that at least one facilitator (a university lecturer) had strong negative feelings towards TLS.

TLS staff

The majority (42) of TLS staff completed the evaluation questionnaire and then attended either a morning or afternoon discussion meeting with a facilitator. As might be expected, TLS rated themselves positively. Of note, however, are the responses to the statement “The National Plan for Higher Education provides a framework for TLS programmes as it is currently implemented by the PUCHE”. Most people rated this as either “disagree” or “unable to answer”. Comments from the discussion group suggested that TLS staff were unclear about the National Plan and its impact on programmes.

Students

TLS surveyed 10 students in five programme areas: BBA, MBA, Nursing, Pharmacology, and Law. As with all of the above groups, the student responses were generally positive. It appeared that the more the students needed the particular programme and the fewer alternatives available, the higher the ratings. From the comments noted by the facilitators, a few themes emerged. Complaints related to logistics (e.g. delay in responses to faxes), although some mentioned that things had improved over the years. One person reported a desire for more feedback from questionnaires from TLS. Students generally valued facilitators, although a few said a minority of facilitators added no value to the programme. Several people noted that the one-stop service model was very good.

Overall, the TLS self-study questionnaire was a valuable, if imprecise, exercise that provided the organization with a snapshot of how various internal and external constituencies viewed the organization. Results were positive and offer TLS some useful information on which to base changes and improvements.