บันทึกข้อความ
มหาวิทยาลัยเทคโนโลยีสุรนารี

หน่วยงาน **สำนักวิชาเทคโนโลยีทรัพยากร**

ที่ **ทม. 5115/89**   วันที่ **30 ธันวาคม 2536**

เรื่อง **การไปดูงาน ณ. ประเทศแคนาดา**

---

๑ เรียน ท่านอธิการบดี

ตามคำสั่งมหาวิทยาลัยเทคโนโลยีสุรนารีที่ 371/2536 ลงวันที่ 16 ตุลาคม 2536 ให้ข้าพเจ้าไปดูงาน

ด้านการจัดการศึกษาระดับอุดมศึกษาที่มหาวิทยาลัย Guelph และ Technical University of Nova Scotia

ประเทศแคนาดา ระหว่างวันที่ 2 ตุลาคม 2536 ถึงวันที่ 14 พฤศจิกายน 2536 นั้น ข้าพเจ้าขอรายงานผลการ

ไปปฏิบัติงานดังนี้

1. การดูงานด้านการจัดการศึกษาระดับอุดมศึกษา

ทาง CUTC ได้กำหนดแนวทางการดูงานใน 9 หัวข้อใหญ่ ๆ คือ System of Governance;

Academic admission, promotion and graduation policies; University infrastructure and administrative

support activities; Faculty and staff appointments and promotion policies; Enrolment plan and human

resource allocation; Co-operative education planning and administration; Post graduate program planning

and research administration; Procedures and mechanisms for curriculunm planning, approval and

impolmentation; Professional program accreditation procedures.

รายละเอียดข้อคิดและข้อเสนอแนะได้เขียนไว้แล้วในรายงานที่แนบเป็นเอกสารหมายเลข 1

2. หลักสูตรสากล

2.1 หลักสูตรร่วมปีที่หนึ่ง

มหาวิทยาลัยที่เกี่ยวข้องกับหลักสูตรสากลทางวิศวกรรมศาสตร์ได้ตกลงในหลักสูตรร่วม

เทอมหนึ่งปีหนึ่งทุกวิชาและเทอม 2 ปีหนึ่งในบางวิชาดังนี้

ปีที่ 1

เทอมที่ 1

		Lect	Tut	lab
MTH 117	Calculus I	4	1	-
MTH 114	Linear Algebra	4	1	-
CHY 118	Chemistry	3	-	2
PCS 115	Physics (Mechanics)	3	2	-
PCS 120	Physics for Engineers	3	-	2

CST 100	Engineering Practice,	2	1	-		
	Ethics & Technical					
	Communications	19	5	4	=	28

<u>ปีที่ 1</u> .

<u>เทอมที่ 2</u>

วิชาที่เรียนร่วมกันทั้ง 3 สาขาวิชา

MTH 227	Calculus II	4	1	-
CPS 210	Digital Computation & Programming	4	-	2
CST	Impact of Technology on Society	3	-	-

วิชาที่เรียนแยกในเทอมที่ 2 ปีที่ 1 มีดังนี้

สำหรับนักศึกษาวิศวกรรมไฟฟ้า

PCS 221	Applied Science	3	-	1		
ELE 212	Electric Circuits	7	2	3		
	รวมทั้งหมด	21	3	6	=	30

สำหรับนักศึกษาวิศวกรรมเคมี

MEC 170	Engineering graphics	1	-	3		
CHY 217	Organic Chemistry	3	-	3		
ELE 210	Fundamentals of Electrical Eng	3	1	2		
	รวมทั้งหมด	20	2	8	=	30

สำหรับนักศึกษาวิศวกรรมเครื่องกล

MEC 126	Scientific Princ. of M.E.	2	1	1		
MEC 170	Eng - Graphics	1	-	3		
ELE 210	Fund. of E.E	3	1	2		
	รวมทั้งหมด	17	3	8	=	28

2.2 หลักสูตรสาขาวิศวกรรมเคมีทั้งหมดเป็นดังนี้

International Program in Chemical Engineering

SUT/TUNS

Academic Year	Summer	Fall	Winter	Program
I	←——————— SUT 1	ESL SUT 2	←——————— SUT 3	SUT
II	WT 1	SUT 4	SUT 5	SUT
III	WT 2	TUNS 1	TUNS 2	TUNS
IV	WT 3	TUNS 3	TUNS 4	TUNS

WT 1 - In Thailand

WT 2 - In Thailand or Canada

WT 3 - In Canada

SUT - SUT 3 as agreed upon at meeting in Halifax, for first two tems (but spread over three terms as requested by ESL group).

SUT

Year	Summer	Fall	Winter	Summer
I	ESL	Calculus I Linear Algebra Chemistry Mechanics (Phys) Physics for Engrs CST (1)	Calculus II Digital Compt. Graphics Organic Chem. Fund. of EE CST (2)	Vacation or Work Term
II		Thermo(for engr) Fluid Mechanics Diff. Equation Fund. of ChE CST (3) Physical Chem.	Chem. Eng. Ther. MU Ops. Numerical Meth. Statics CST (4)	Vacation or Work Term

TUNS

Year	Fall	Winter	Summer
III	ChE 1032 Kinetics ChE 1025 Separations ChE 1050 PCI ChE 1044 CAD ChE 0812 Tech. Com. Met 0700 Mat. Sci.	ChE 0804 Ind. Chem. ChE 0824 Heat Trans. ChE 0870 Env. Eng. ChE 0812 Tech. Com. IE 0718 Economics AM 3131 Prob. & Stat	Vacation or Work Term
IV	ChE 1334 Reactor Design ChE 1326 Mass Trans ChE 1352 PC II ChE 1341 PD I XXXX Tech. Elective ChE 0812 Tech. Comm.	ChE 1428 Tran. Phen. XXXX Tech. Elective XXXX Tech. Elective ChE 1442 PD II XXXX ChE non Tech. Elective ChE 0812 Tech. Comm. MET 0811 Corrosion	

เรื่องอื่น ๆ ที่เกี่ยวกับ International programs ที่ทาง มทส. ควรหารือกันและหารือกับ CUTC ก็มี

ก) เรื่องค่าใช้จ่ายที่ มทส.ต้องจ่ายให้ Canadian Professor ที่มาช่วยสอน ซึ่งทาง CUTC เสนอว่าควรจะเป็นประมาณ $4,000 /เดือน (ค่าเดินทางไป-กลับ และที่พักฟรี) โดยส่วนตัวข้าพเจ้าคิดว่าสูงไป

ข) ค่าเล่าเรียนที่นักศึกษา international program ต้องจ่ายเมื่อนักศึกษาในแคนาดา ทางCUTCเสนอเป็น Flat rate คือปีละ $7,500 เรื่องนี้ยังต้องมีการเจรจาระหว่างมหาวิทยาลัยในแคนาดาด้วยกัน และระหว่าง CUTC กับ SUT อีก ความเห็นส่วนตัวน่าจะลดต่ำลงกว่านี้อีก เพราะการจะคิดว่าทางรัฐบาลแคนาดาจะให้มหาวิทยาลัยต่าง ๆ เก็บค่าเล่าเรียนเป็น 2 เท่าใน 2 ปี ข้างหน้าไม่น่าจะทำได้

ค) สำหรับ International Program in Chemical Engineering นอกจากหลักสูตรสมบูรณ์ทั้ง 4 ปี ที่แสดงให้ดูข้างบนแล้ว course outlines, course information sheets และ Lab Manauls ทั้งหมดได้รับแล้ว

3. โครงการ Joint-Ph.D. Programs

ทาง CUTC ต้องการให้ทาง SUT รีบดำเนินการหา Co-Thai Supervisors, หา Thai Graduate Student Candidates โดยทางแคนาดาเองก็จะจัดส่ง resume' ของ professors ที่สนใจมาเพื่อทางเราจะได้หา Co-supervisor เพื่อ match กัน สำหรับสาขาอื่นทาง CUTC จะจัดส่งข้อมูลเหล่านี้ให้ฝ่ายไทยก่อน 31 มกราคม

2537 ในสาขาวิศวกรรมเคมีและวิศวกรรมโลหะการ ข้อมูลเหล่านี้จาก TUNS ได้หมดแล้ว

4. การ Implement โครงการเชื่อมโยงและร่วมมือทางวิชาการระหว่างมหาวิทยาลัย-เทคโนโลยีสุรนารีและกลุ่มเทคโนโลยีมหาวิทยาลัยแคนาดา

การไปดูงานและฝึกอบรมของผู้บริหารและเจ้าหน้าที่เป็นชุดแรกของการ Implement โครงการจากด้าน มทส. เนื่องจากการดูงานและฝึกอบรมนั้นทำกับบุคลากรของ มทส. หลายระดับ คือ ระดับผู้บริหาร 2 คน ระดับอาจารย์และหัวหน้าสาขาวิชา 2 คน ระดับเจ้าหน้าที่สนับสนุนทาง ห้องสมุดและศูนย์เครื่องมืออีก 2 คน จากที่ได้ประสบเองได้เห็นได้ยินและได้ฟังจากทั้งฝ่ายไทย และแคนาดา ขอเสนอข้อคิดและข้อเสนอแนะสำหรับการจะ implement โครงการนี้ในขั้นต่อไป ดังนี้

4.1 โปรแกรมการฝึกอบรม โดยทั่วไปพบว่าการเตรียมวางแผนและ implement 'Customized training' สำหรับ SUT Academic Administrators นั้นยังไม่ดีเท่าที่ควร ทั้งในเรื่อง โปรแกรมและระยะเวลา ตามโครงการจะมีผู้บริหารไปอีก 2 คน ควรจะตกลงกับทาง CUTC เกี่ยวกับโปรแกรมและระยะเวลา ซึ่งเชื่อว่าสามารถทำได้กระชับและมีประสิทธิภาพกว่าครั้งแรก และอยากให้ revise program และระยะเวลาสำหรับ Customized training ที่จะมีให้สำหรับ 6 SUT Faculty members & Co-ordinators ด้วย

4.2 การจัดส่งคนไปฝึกอบรมในคราวต่อไปโดยเฉพาะในระดับเจ้าหน้าที่สนับสนุน นอกจากคำนึงถึงความรู้พื้นฐานที่ต้องใช้แล้ว ควรจะคำนึงถึงความสามารถในการใช้ภาษาอังกฤษ ด้วย เพราะในครั้งแรกมีปัญหาซึ่งจะมีผลกระทบทั้งในด้านประโยชน์ที่ได้และการเสียค่าใช้จ่าย เพิ่มในส่วนของ มทส.

4.3 การ Implement โครงการนี้ในแต่ละขั้น ควรจะคำนึงถึงความสัมพันธ์ของแต่ละ โครงการย่อยภายในโครงการใหญ่ เช่น International programs จะสัมพันธ์กับ Joint Ph.D. programs, ESL หรือแม้แต่การเตรียมงานด้าน Co-op สำหรับนักศึกษา ถ้าประสานโครงการย่อยดี ๆ จะประหยัด ค่าใช้จ่ายและได้ประโยชน์มาก

จึงเรียนมาเพื่อโปรดทราบ

(ลายเซ็น)

(รองศาสตราจารย์ ดร.เกษม ปราบริปูตลุง)
คณบดีสำนักวิชาเทคโนโลยีทรัพยากร

(handwritten notes and stamps)

Report on Customized Training for an SUT academic
administrator in Canada.

Name : Dr. Kasem Prabriputaloong
       Dean Institute of Resources Technology, SUT
Date : Oct 2, 93 - Nov 13, 93 at the University of Guelph
        and Technical University of Nova Scotia.

Report on Customized Training for an SUT academic
administrator in Canada.

Name : Dr. Kasem Prabriputaloong

         Dean Institute of Resources Technology, SUT

Date   : Oct 2, 93 - Nov 13, 93 at the University of Guelph

         and Technical University of Nova Scotia.

Executive Summary

This customized training for SUT academic administrator was carried out by allowing the administrator to visit two Canadian Universities which in this case is the University of Guelph and Technical University of Nova Scotia. The administrator spent appoximately 3 weeks at each of the two universities. During the 3 weeks, he met and discussed with his Canadian counterpart about the administration system, the planning and the implementation of various university academic policies. Then analyzed and compared between the two Canadian universities and between Canadian universities and Suranaree University of Technology. The outcome may be summarized as follows :-

1. System of governance is very similar in all three universities ie Guelph, TUNS and SUT. Each university has a Board of Governors or equivalent and the Senate or aquivalent as specified by the University Act. Although powers and duties given to the Board and the Senate including the number of standing committees may be different. The highest probably is at Guelph with 10 standing committees for the Board and 11 standing committees for the Senate and the lowest at SUT with 2 standing committees for the Board and no standing committees for the Senate.

2. Academic admission, promotion and graduation policies . Academic admission is different as TUNS takes only students who have completed the first two years from the associated universities and Guelph takes those who have; Ontario high school certificates or equivalent through the provincial admission centre. At SUT the admission is done in 2 ways : through the National Entrance Examination and the University Quota System for students from the Northeast. Promotion and Graduation policies at the 2 Canadian Universities are quite similar that in grading they use the percentage system with alphabet equivalent and the promotion is more on the pass by semester system with provision of supplementary examination for those who fail. At SUT we use the grade point average and do not emphasize on the pass by semester idea.

3. University infrastructure and administrative support activities.

In general, most universities either in Canada or Thailand have similar infrastructure and administrative support activities. The difference may be only in size because it depends to a great extent on the size and administrative structure of the university. There are 2-3 support activities that should be mentioned which to me it will help the university to reach the quality education that they all aim at. They are :

1. Teaching Support Services

2. Student Resource Center

3. Department of Atheletics

These 3 activites at the University of Guelph can be used as an example or a guideline.

4. Faculty and staff appointments and promotion policies

Each university has its own policy which is different in details from one and other. However, SUT can use that of TUNS in its Collective Agreement as a guideline to improve that of its own.

5. Enrolment plan and human resource allocations.

In theory, these two functions should go hand in hand but in reality especially at present time, the human resource allocation at Canadian Universities tend to be fixed. So enrolment plan has to be worked on an assumption of fixed human resources.

6. Co-operative education planning and administration were found to be very similar in the two Canadian Universities and also similar to what is proposed at SUT.

7. Post graduate programs planning and research administration.

For post graduate program planning in the two Canadian Universities is similar at the university level that is to go from departments and end at final approval from the Senate and the Board. Except for new Ph.D degee program at universities in Ontario, the approval from the Council of Ontario Universities is also needed.

8. Procedures and mechanisms for curricular planning, approvals and implementations

These are similar in the two Canadian universities that they are both making use of the existing standing commitiees or subcommittees from the departmental level to the university level with final approval from the Senate and the Board. At SUT, the final step is the same except the initial step we tend to use Ad Hoc committee.

9. Professional program accreditation procedures

These procedures are similar both in Canadian and Thai Universities because the programs have to be accredited by the Canadian Engineering Accreditation Board and the Engineering Licensing Board of Thailand respectively. Otherwise, the graduate cannot register as a professinal engineer in the province or country as case may be.

Introduction

This report is an outcome of a Thai academic administrator who has undergone a 6 weeks so called 'customized training' in Canada. The training consists of a visit to two Canadian Universities, Guelph and TUNS and the length of the visit is about 3 weeks at each institutions. The activities during the training include discussions, visits with host academic administrators and documents study in order to assess and analyze the following academic administrative functions :-

- System of governance/ university standing committees

- Academic admission, promotion and graduation policies

- University infrastructure and administrative support activities

- Faculty and staff appointment and promotions policies

- Enrolment plan and human resource allocations

- Co-op planning and administration

- Postgraduate programs planning and research administration matters.

- Procedures and mechanisms for curricular planning, approvals and implementations

- Professional program accreditation procedures

This report will give the findings in all topics mentioned above for each university visited and will compare the findings with the Thai including discussion on some pertinent points. Finally, some conclusion will be drawn but it will be far short of the goal of obtaining a faculty manual for SUT faculty with so many obvious reasons.

UNIVERSITY OF GUELPH

1. System of governance/ university standing committees.

The University of Guelph was corporated by an Act of the Ontario Legislature in 1964. The Act specifies that control of the University lies with the Board of Governors and the Senate.

The Board of Governors comprises 24 members and is responsible for the government, conduct, management and control of the University and its properties, revenues and expenditures, and business affairs.

The Senate has 181 members and has responsibility for educational policy, including the creation of faculties, departments, schools and institutions; courses of study and standards of admission and continuation of study; qualification for and granting of degrees, diplomas, (including honorary degrees) ; examinations and examiners, fellowships, scholarships and bursaries; and for the election of the Chancellor. Standing Committees of the Board are as follows :-

1. Executive Committee

2. Finance Committee

3. Physical Resources and Property Committee

4. Membership Committee

5. Audit Committee

6. Pensions and Benefits Committee

7. Senior Compensation Committee

8. Negotiations Committee

9. External Relations Committee

10. Board Long-Range Planning Committee

And Standing Committees of the Senate are as follows :-

1. Executive Committee

2. Committee on Bylaws and Membership

3. Board of Undergraduate Studies

4. Board of Graduate Studies

5. Research Board

6. Library Committee

7. Committee on Student Pettitions

8. Committee on Awards

9. Committee on University Planning

10. Committee on Student Development

11. Committee on International Activities

2. Academic admission, promotion and graduation policies.

These policies are within the jurisdiction of Senate. To understand how these policies are formulated, it is best to use Board of Undergraduate Studies 's function as an example. BUGS, among its many other responsibilities are to recommend the Senate on-undergraduate degree educational policies; admission policy, academic standards and candidates for undergrad degrees, Under BUGS, there is a program committee for each undergraduate degree, diploma and Continuing Education Program offerred by the University. Besides these Program Committees, there are also program committees for General Studies Programs, for AKADEMIA program. The program committee, has, one of the responsibilities to recommend admission and procedure for its program to the Board, admit students, receives and review marks, decide continuation of study ; and recommend the graduation of individual students within the program.

Proposal for admission requirements will be forward from Program Committee to the Office of the Associate Vice-President Academic. It is the responsibility of the College Dean concerned to ensure that the proposal is editorially concise ; is consistent with the format of the University, and include supporting arguments and documentation.

The Associate Vice-President Academic will decide whether or not a proposal represents a substantive change or significantly alters academic decision previously made. If it does, the Associate Vice-President Academic will submit the proposal to the Editorial Advisory Committee who will advise the Associate Vice-President Academic as to whether the proposal is in a suitable form for consideration by the Board and by Senate. After consider the advice of the Editorial Advisory Committee, the Associate Vice-President may send the proposal back to Program Committee along with specific comments.

The Associate Vice-President Academic will submit all substantive changes to the Board for approval and for subsequent transmittal to Senate for final debate and approval.

The present academic admission, promotion and graduation policies are as follows

1. Admission requirements

1.1 For students from Ontario, they have to complete either the Ontario Secondary School Diploma (OSSD) including 6 Ontario Academic Course credits or the Secondary School Honour Graduation Diploma (SSHGD) or equivalent.

1.2 For students from outside Ontario, they can be classified into.

1.2.1 Other Provinces of Canada.

For Other provinces except Quebec they are required to complete grade 12. For Quebec, they have to complete Senior High School Leaving Certificate plus 12 academic credits from appropriate CEGEP program

1.2.2 United States of America

Normally a minimum of 30 semester hours of university work in an accredited institution of higher learning is required, but the admission committee is prepared to consider high school graduate with high academic calibre.

1.2.3 Countries under the British System

For these countries, General Certificate of Education in required.

1.2.4 Hong Kong

Hong Kong, the following certificates are recognized

a) The General Certificate of Education

b) The University of Hong Kong Matriculation Certificate.

c) The Hong Kong English School Certificate.

1.2.5 India

For India, the following certificate are recongnized

a) The G.C.E.

b) First degree granted by an Indian University with Standing in the first or second class.

1.2.6 Other countries

Normally the secondary school certificates which admits to university in another country is accepted.

Application for Admission Procedure

The qualified applicants must submit the application forms to the Ontario Universities Application Centre.

Academic Standing

Students registered each semesters either as a full-time or as part-time students. A student who is registered in at least four courses for a semester is considered to be full-time but if registered in not more than three courses is considered to be part-time.

Each courses for which a student is registered for credit is defined as courses attempt. The grade assigned for each course attempt will become part of the student's academic record. With the exception of a few courses, for which the Board of Undergraduate Studies has approved an outstanding/ pass/ fail grading system, a numerical grade shall be awarded for each course with standing indicated as follows :

A+	90 - 100 %
A	85 - 89 %
A⁻	80 - 84 %
B+	77 - 79 %
B	73 - 76 %
B⁻	70 - 72 %
C+	67 - 69 %
C	63 - 66 %
C⁻	60 -- 62 %
D+	57 - 59 %
D	53 - 56 %
D⁻	50 - 52 %
F	0 - 49 %

D (50 - 59) is minimally acceptable grade.

All degree programs have established conditions which must be met for continuation of study. Continuation of study within a program is permitted provided the standard of academic performance listed below are met.

In order to proceed beyond and the specified number of course attempts, the number of failures must not exceed the permissible limit and the minimum number of courses with grades of 60 % or higher must be achieved as indicated :

No of Course Attempts	Max.No of Course Failures permitted	No of Course Attempts	Min. Required No of Courses with a grade of 60 % or higher
1 - 10	3		
11 - 15	4	6 - 7	1
16 - 20	5	8	2
21 - 25	6	9	3
26 or more	7	10	4
		11	5
		12 - 13	6
		14	7
		15	8
		16	9
		.	
		.	
		.	
		.	
		.	
		.	
		60	36

Failed Courses

In general, a student who is eligible for continuation of study in the Program but has failed to gain standing in one or more of courses attempted will be required to repeat the courses if the course is required in the Program. The Academic Review Committee may under special circumstances, allow a student the opportunity to complete a supplemental previlege.

Graduation

Normally the maximum time allowed for the completion of the six semester General Program is six calendar years, and for the completion of the eight semester Honour Program, eight calendar years.The normal academic residence requirement of The University is registration for six

semesters in a general program and eight semesters in an Honour Programs as a full-time student.

Standing on Graduation

Standing on graduation shall be noted only for graduates from the Honours Programs.

Degree with Distinction

Cumulative average of 80 % or higher on all courses attempts.

Degree with Honours

Cumulative average of 70 - 79 % on alll courses attempts.

Degree with Standing

Cumulative average of less than 70 % on all courses attempts.

3. University Infrastructure and administrative support activities.

Since the delegation of authority is down to the departmental level. The department heads or chairs can decide how to spend the departmental budget. The university Finance Department will give guidelines and monitor that the budget is not overspent. Purchasing department also facilitates the purchasing of equipment or supplies as needed by the department. As far as human resource is concerned, the requested is submitted through various committees and subcommittees from the departmental level to the faculty, the Senate and final approval from the Board. The facilities planning especially the classroom facilities is done through the Teaching Support Sevice Centre. The Registrars' office is an important unit in dealing with admission, registration, class scheduling and graduation. The classrooms scheduling ie class time tables, examination time tables are done through the Scheduling Section of the Office of the Rigistrar and surprisingly it is done manually using only 2 persons. This is of course, they must have the full cooperation from all departments.

4. Faculty and staff appointments and promotions policies.

There is only one committee at the departmental level that deals with the appointments and promotion of faculty & staff. This is called the Promotion & Tenure Committee. Once it is approved by this committee, it is sent to the Dean, the V.P Academic and the President respectively for final aopproval.

5. Enrolment plan and human resource allocations.

Enrolment will start at departmental level by chair & Departmental Committee. Then the proposal will be sent to program committee, BUGS and Senate respectively. If the resource allocations is also needed, the proposal has to get final blessing from the Board of Governors.

6. Co-op planning and administration

Co-operative education is a process of learning which formally integrates the student's academic study with work experience in co-operating employer organization. The usual plan is for the student to alternate periods of experience in appropriate fields of business, industry, government, social services and the professions. These co-operative programs, and the flexibility allowed within these programs, are facilitated by the trimester system-unique in Ontario at the University of Guelph. Students may be admitted to the University at three points in the academic year ; September, January, and May. Students will spend three or four semesters of academic study on campus before embarking on their first work semester. Each program will have three, four or five work semesters as part of the degree requirements. To be admitted to a co-operative program, each student must achieve a 70 % over all average prior to admission, enrol in an honors program, be a Canadian citizen or Landed immigrant, and be able to express their career aspirations forcefully, and show maturity during a selection interview.

In order to remain in the co-operative program, a student must be eligible to proceed in the honors program, complete a work report which is evaluated as satisfactory or better and perform in satisfactory manner on the job.

Employment inteviews will generally occur on campus in the middle of the academic term preceeding each work semester. Salaries will be competitive in nature, and negotiable between the employer and the student.

Co-operative education is an educational partnership involving the university, the employer and the students. The responsibility of the University may be divided into 2 parts as follows
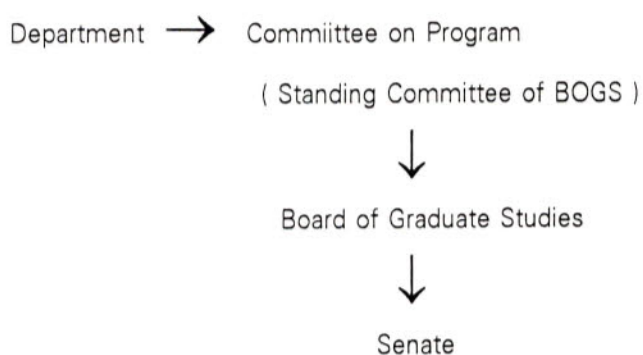
1. Co-operative Education Faculty Advisor

    - is responsible for admission procedures within the Department

    - provides academic counselling to student eg. preregistration, course scheduling

    - encourages integration of applied and theoretical knowledge and experience.

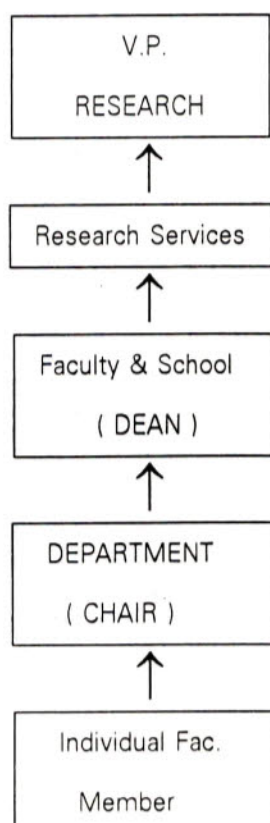   - co-ordinates advising on, and grading of, work reports

- may visit students on the job with the Co-operative Education Co-ordirator

2. Co-operative Education Co-ordinator.

- identifies work opportunities for students

- conducts site visits and monitors students work perfomance.

- counsels students for the competitive employment process.

- fosters a close working relationship between employers and the university.

7. <u>Post-graduate program planning and research administration matter</u>

Post graduate program planning will be as follows :-

Department $\longrightarrow$ Commiittee on Program

(Standing Committee of BOGS)

$\downarrow$

Board of Graduate Studies

$\downarrow$

Senate

Research administration

```
┌─────────────────┐
│      V.P.       │
│    RESEARCH     │
└─────────────────┘
         ↑
┌─────────────────┐
│ Research Services│
└─────────────────┘
         ↑
┌─────────────────┐
│ Faculty & School │
│    ( DEAN )     │
└─────────────────┘
         ↑
┌─────────────────┐
│   DEPARTMENT    │
│    ( CHAIR )    │
└─────────────────┘
         ↑
┌─────────────────┐
│ Individual Fac. │
│     Member      │
└─────────────────┘
```

8. Procedures and mechanism for curriculum planning, approval and implementations

If there is going to be a change in a curriculum or planning for a new curriculum, the procedure will be similar. For a change in a curriculum, the Program Committee of that particular curriculum will be responsible for the submission of the proposed change to BUGS or BOGS as the case may be. If the changes do not affect the regular budget, BUGS or BOGS can further summit to the Senate for final approval and the program can be implemented. In the case, where more budget in needed for implementation, the Senate has to submit for the Board of Governors"s approval before the new curriculum can be implemented.

Technical University of Nova Scotia

1. System of governance/university standing committees.

According to the Technical University of Nova Scotia Act, there is a Board of Governors which is clearly indentified as the controlling body in all academic or administrative matters pertaining to the University. However, in establishing departments, professional chairs, and courses of study, the Board must seek Senate"s advice. Thus, while the Board is the final authority in all matters affecting the University, in particular instances it only does so upon the recommendation of the Senate.

The Senate is the highest academic body of the University. It has duty & power to inquire into all matters that might lend to enhance the usefulness of the University.

The Board of Governors and the Senate have standing committees as follows :-

The Board of Governors". Standing Committees

- Executive Committee

- Finance Committee

- Audit Committee

- Personnel Committee

- Buildings & Grounds Committee

- Fund Raising Steering Committee

- Nominating Committee

- Campaign Fund Allocations Committee

and the Senate's Standing Committees

- Steering Committee

- Academic Affairs Committee with 3 sub-committees :-

    - Library sub-committee.

    - Teaching & Learning sub-committee.

    - Continuing Education Division Sub-com.

- Graduate Studies Committee

- Planning Committee

- Nominating Committee

- Honorary Committee.

2. Academic admission, promotion and graduation policies.

At TUNS, these academic policies are set by each faculty through the faculty's Undergraduate Studies Committee

The admission requirement for the faculty of engineering is dliploma of engineering from all Associated Universities.

The grading system, the percentage with equivalent letter grade is used. Examples of this percentage-grade equivalent are as follows.

80 - 100 %	Equivalent letter grade	A
50 - 59 %	Equivalent letter grade	D

A student must achieve a grade of 50 % or higher in each course of the curriculum and satisfy the regulation set out in the Calendar in order to graduate. For student who achieves grade less than 50 % in a required course may write a supplemntary examination. If the grade is not raised above 50 % or a supplementary examination is not permitted, the student must repeat the course. The student is allowed to repeat the course only once, if he fails again he will be out of the university.

In order to continue in good academic standing, a student must achieve a Session Numerical Average of at least 60% for each session during which the student is enrolled in courses of instruction A student whose Session Numerical Average is below 50 % in any session will be required to withdraw from the program. A student who has been required to withdraw only once from the program may apply to be readmitted to the same program after a minimum of two sessions from the time of withdrawal.

The process used to certify that graduation requirements have been met by each graduate begins with the Registrar. The Registrar prepares the graduation list and sends it to the department with complete transcripts. The departments verify that the student is eligible to graduate. The Registrar has the graduation list and marks approved by the Faculty. The Senate approves the graduation list for Convocation.

3. University infrastructure and administrative support activities

TUNS if compared with Guelph is much smaller. The administrative and academic administration is quite self contained within each of the two faculties. The over all policy of the university is to allocate as many budget items to the departments as possible. With this set up the decision can be made at the department heads. However the university does provide the facilities for purchasing equipment or supplies through the Finance & Purchasing Department. Other infrastructure and administrative supports are the Registrars's Office, the Atheletic Centre, and the Co-operative Education and Counselling Centre. Besides the above mentioned, there is also a university Research Sevices Centre which functions more or less like a co-ordination office for research activities administrative requirements.

4. Faculty and staff appointment and promotion policies.

There are 3 steps for staff appointment namely initial appointment, reappointment and tenure. The procedure for each step is briefly as follows :-

Initial Appointment

Upon receiving notice from the Board that an initial appointment is to be made, the Dean shall advertise the post and consult the appropriate Department head. The Department head shall consult with members of the Department or constitute an Appointments Commiittee to seek their or its recommendation. The Dean will make every reasonable effort to ensure that short-listed candidates are interviewed by a representatives authorized by the Department.

Upon receipt the recommendation of the Department Head, the Dean shall submit there along with his own recommendation to the President, who shall submit all of the foregoing recommendations along with his own, to the Board, who shall make a decision to appoint or not to appoint.

Reappointment and Tenure.

During the final twelve months of a Member's initial contractually limited term appointment, the Dean will consider whether he should be reappointed by consulting with the appropriate department head. The Department head will consult the tenured member of of the Department and one untenured Department Member elected by the Department. The Dean shall recommend to the President either to reappoint or not reappoint that Member.

The President shall consider the Dean's recommendation and submit his

recommendation and that of the Dean, if different, to the Board. The Board will decide either to reappoint or not to reappoint that Member.

A member who is in his fifth year of full-time employment with the University shall be considered by the Tenure Committee for tenure at least 6 months before the end of his fifth year full-time employment.

The Tenure Committee in each Faculty consists of 2 tenured members elected by the Faculty, the Dean and one tenured member appointed by the President

The Dean will ask the condidate to provide the Committee with an up-to-date curriculum vitae, any material which the candiate wishes to be considered and any other material which the committee wishes to consider, which is in the control of the condidate.

The Tenure Committee will considate the recommendation of the Members of the Department and the recommendation of the Department Head, if different then recommends to the President whether the condidate should or should not be granted tenure.

The President shall forward his recommendation and that of the Tenure Committee to the Board and the Board will make the final decision.

Academic Promotion

There is a Promotions Committee which consists of two tenured full professors elected by faculty, one from each faculty; and two Deans appointed by the President.

There is also a Departmental Committee which consists of tenured members of the Department and one untenured members of the Department elected by the Department.

The eligible candidates who wish to be considered for promotion shall inform the Dean and provide the following information to the Dean who shall forwoard it to the Promotion Committee

    i) an up-to-date curriculum vitae.

    ii) any material he wishes to be considered.

    iii) if the candidate is being considered for promotion to the rank of Professor, a list of no less than four and no more than six external referees from which the Promotions Committee, in Consultation with the candidate's Department, may choose up to three to contact for written references

The department in which candidates are eligible for promotion will make

recommendations through the Department head to the Promotions Committee.

The Promotions Committee will recommend to the President whether the promotion should be granted or not. The President shall review the recommendations and recommend the Board whether to promote or not.

5. Enrolment plan and human resource allocations.

Enrolment plan

As the University admits almost soley the students who hold a Diploma or Certificate in Applied Science or Engineering from an Associated University. At present, the University can take all of those who have the above qualification.

Human resource allocations

Establishment faculty and staff positions in the faculties and school are allocated by the President on the basis of requests from the Deans. In the Faculty of Engineering the request of the Dean is based on the academic and research needs of the Department as conveyed by the Head.

6. Co-op planning and administration

Co-operative education is quite new for TUNS. In the Faculty of Engineering, all departments that have co-op programs operate on 8 academic terms with 5 study terms and 3 work terms. The placement of 3 work terms may be different from department to department.

The administration of co-op education is done through the Co-operative Education and Career Counselling Centre, the Faculty of Engineering Co-operative Committee and the Department co-operative education co-ordinator. The placement is normally done by the Co-operative Education Centre where as the supervision and evaluation of the work term is done by the department.

## 7. Postgraduate program planning and research administration matters.

Postgraduate program planning usually starts at the faculty and going through the Graduate Studies Committee, the Senate and final approval from the Board. For research administration, the application for research grants is done at departmental level. The Research Service Centre will assist in checking the completeness of the application forms. In the cases of contracted research,

the Centre will look into the contract and make sure that it is not to the disadvantags of the university.

8. Procedures and mechanisms for curriculum planning, approval and implementations.

A request for a change in the curriculum normally originates in one of the departments. Once the department considers and decides to recommend a change, the change is submitted by the department to one of two Faculty Committees. If the change is in the undergrad program, it is submitted to the Curriculum and Acadmic Regulations Committee. If the changs is in a graduate program, it is submitted to the Graduate Program Committee. The change is then considered by the appropriate committee and is either referred back to the department for clarification or modification or is recommended to the Faculty. The change is then considered by the Faculty of Engineering, which meets monthly. If approved, the Faculty submits the reconmendation to the Senate for consideration. The Senate, which meets bimonthly, submits its recommendations to the Board of Governors for final approval. The only constraints on curriculum changes are the normal academic and financial constraints.

A request for a change in the curriculum at the Associated Universities may originate from an engineering department at TUNS or from an engineering department at an Associated Universities. Such request would normally be considered in the Associated Universities' Directors of Engineering Commmittee prior to commencing the process detailed above. Course Development Workshops are held periodically to review the uniform curriculum at the Associated Universities. A chart entitled Curriculum Approval outlines the curriculum control process.

Curriculum Approval

```
                    ┌──────────────┐
                    │   Board of   │
                    │  Governors   │
                    └──────┬───────┘
                           │
                    ┌──────┴───────┐
                    │    Senate    │- - - - - - - - - - - - - - - - ┐
                    └──────┬───────┘                                │
                           │                                        │
                    ┌──────┴───────┐          ┌──────────────┐      │
                    │  Faculty of  │          │   Academic   │      │
                    │ Engineering  │          │ Planning Com.│      │
                    └──────┬───────┘          └──────┬───────┘      │
                           │                         │              │
     Graduate  ───────────┴──────── undergrad.      │              │
          │                                          │              │
   ┌──────┴───────┐        ┌──────────────┐          │              │
   │  Grad.Prog.  │        │ Curriculum + │          │              │
   │  Committee   │        │Acad.Reg.Committee        │              │
   └──────┬───────┘        └──────┬────┬──┘          │              │
          │                       │    │             │              │
   ┌──────┴───────┐        ┌──────┴────┴─────────────┴──────────────┴──┐
   │              │        │             Assoc.                        │
   │ Engineering  │        │          Universities                     │
   │    Depts     │        │   Directors of Engineering                │
   │              │        │          Committee                        │
   └──────────────┘        └───────────────────────────────────────────┘
```
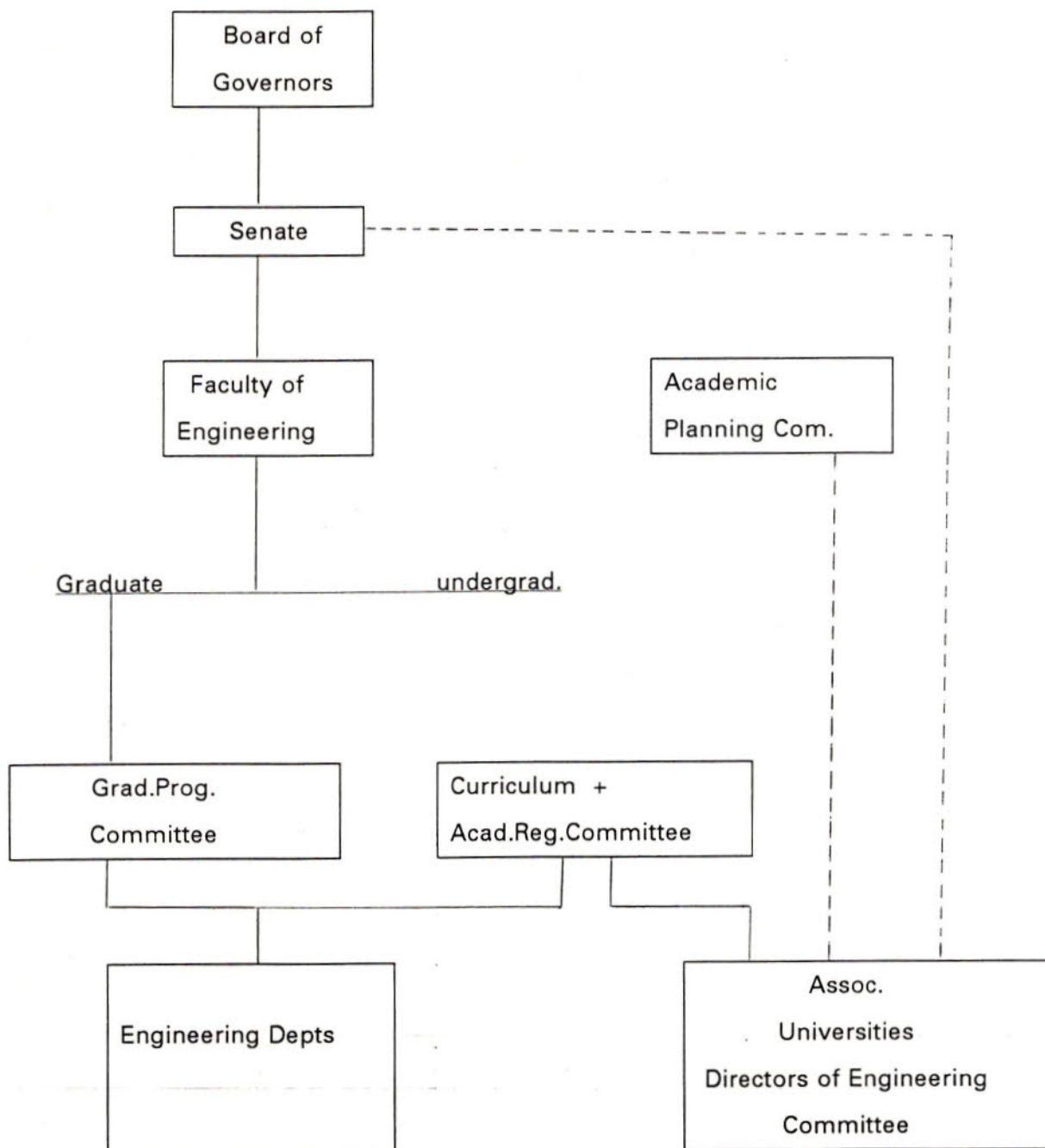
9. Professional program accreditation procedure

Engineering programs in Canada have to be accredited by Canadian Engineering Accreditation Board (CEAB) before the graduates of the programs can be considered giving professional licences.

The Canadian Engineering Accreditation Borad has the status and authority of a standing committee of the Canadian Council of Professional Engineers. Its objective is to accredit Canadian engineering education programs to ensure that they meet or exceed educational standards aceeptable for profession engineering registration in the Canadian provinces and territories.

The engineering profession expects of its members competence in engineering as well as an understanding of the effect of engineering on society. Thus , accredited engineering programs must contain not only adequate mathematics , science and engineering , but they must also develop communication skills and an understanding of the environmental , cultural , economic and social impacts of engineering on society.

The purpose of accreditation is to identify to the constituent members of the Canadian Council of Professional Engineers those engineering programs that meet the criteria for accreditation. These criteria are formulated to provide graduates with an education satisfying the academic requirements for registration. The processes of accreditation place emphasis on the quality of the students , academic staff, support staff and educational facilities.

Accreditation procedures

An accreditation assessment is initiated only at the invitation of an institution and with the consent of the appropriats constituent member of the CCPE. The CEAB , having recived the invitation , selects a chair for the visiting team ; usaully , the chair is a member of the CEAB. The other members of the visiting team are selected by the chair except for the member(s) selected by the CEAB in concultation with the appropriate constituent member of the CCPE. All visiting team members must be registered professional engineers.

Several months before the date of an accreditation visit, the CEAB Secretariat sends to the institution documentation requried for the visit. Normally , an accreditation visit takes twodays to complete. It provides an opportunity for the visiting team to assess qualitative factors such as intellectual atmosphere and moral, professional attitudes and quality of staff and students.

Before the end of the visit , the visiting team meets with the Dean and , preferably

the Chairs of the Deparments responsible for the program to review the perceived strenghts and weakness of the programs and to indicate any areas of concern.

The chair of the visiting team, working with the team members, prepares a report of the program(s) visited.This is a report of the team's findings which includers : perceived strengths and weaknesses, are as of conformance to and deviation from the CEAB criteria as interpreted by the visiting team, matters of concern and suggestions for improvement, if any. No recommandations for CEAB accreditation action are included in the report.

The visiting team's findings , as outlined in the report , are sent by the CEAB Secratariate to the institution for comment and reaction and to ensure accuracy and completeness.

The accreditation decision is made by the CEAB as the result of information gained from the accreditation visit process or from the reports submitted by the institution at the request of the CEAB.

The decision of CEAB may be

1. grant accreditation to a program for a specific term , the maximum being 6 years.

2. grant limited - term accreditation, extendable to a longer term (not exceeding 6 years) , subject to receipt of a report which convinces the CEAB that the matters qiving rise to its concerns, have been resolved adequately.

3. deny accreditation

Following a CEAB accreditation decision , the institution is notified of the decision through the Dean and the President and the Dean is provided with a comprehensive explanation for it . The institution is expected to inform students and staff of the process of accreditation and of the accreditation status of the program.

Discussion

1. System of governance/ university standing committees.

Both university have the same system of governance , and it is also the same for SUT. However , the Act of each university specifies the duties and powers of the Board of Governors and the Senate quite differently. Although in all cases , the Board of Governors is the highest authority of the university , in case of the university of Guelph , the Senate , has the highest authority in the academic matters of the university.   The academic administration of the university will be finalized at the Senate unless it has the budget component in it . The composition and number of members in the Board of Governors and in the Senate are also different . This is also true for the number of standing committees.

2. Academic admission , promotion and graduation policies

Academic admission policy is quite different between the two universities. The University of Guelph takes the high school graduates directly into the university where at TUNS will take only those who have diploma from their associated universities . The University of Guelph may have to put mininum percentage for some degree programs as there are more applicants than the university can take . At TUNS , they can still take all those who obtain the Diplomas from their associated universities.

The grading system in both university seems to be similar that they are both on the percentage system with equivalent letter grade. The student has to pass on the whole semester courses with the provision of supplementary examinations. The curriculums for most professional degrees are rather fixed. This is quite different to systems used in SUT or in Thailand where the credit system is used.

3. University infrastructure and administrative support activities .

The delegation of power from the top to the smallest academic unit makes the university infrastructure and administrative support less important .

This delegation of power plus some administrative guideline does help to reduce the bureaurcracy in the administration . There is not noted difference between the two universities but seems to be quite different at SUT. where it is more centralized.

4. Faculty and staff appointments and promotion policies

At the University of Guelph , this is done through Promotion and Temure Committee where as at TUNS is done according to the Collective Agreement.

5. Enrolment plan and Human resource allocations

Enrolment plan and human resource allocations at both Guelph and TUNS seem to be quite stable . There seems to be no long range plan for enrolment and at present the number of enrolment both undergraduate and graduate studies are limited by human resources and other supporting facilities. In one aspect , the university seems to have the autonomy but in term of initiating new programs especially graduate programs at Ph.D. level, the university , in case of Guelph , has to get the approval of outside commitee i.e Council of Ontario Universities.

6. Co-operative education planning and administration.

The co-operative education planning at both universities are quite similar. The co-op program is usually optional and the work term normally starts after the completion of 2 years academic work or equivalent as the case of TUNS. The total work term is about 3-4 and the student has to come back to the university at least one study term.

The administration of the cooperative education is also similar. That is both universities have the Co-operative Education Centre at the university level and The departmental supervisor at the faculty or department level. The co-ordination and co-operation between these two units are very essential for the success of the program.

7. Post graduate program planning and research administration

Postgraduate program planning in the case of new program and at Ph.D.level, the approval may be beyond the university especially in the Province of Ontario. The University has to justify the necessity, of the program , the strength of the faculty member and the deparment concerned to the Council of Ontario Universities.

For research administration , the system of the two universities are similar. Both have research services unit at the university level to co-ordinate and assist in administrative needs when proposals were submited for research grants or funds.The research services unit also helps to monitor the use of research funds and the progress of the research works.

8. Procedures and mechanisms for curricular planning approvals and implementations

Procedures and mechanisms for cuuricular planning , approvals and implementations are very similar although the steps taken may be not exactly the same.

9. Professional program accreditation procedures

The procedure is the same for all Canadian universities as it is done by the Canadian Engineering Accreditation Board . It is important that the program must be accredited otherwise the graduate of the program cannot be registered as a professional engineer.

Conclusion

Besides the 9 topics , there are some observations that worth noting.

1. The delegation of power and authority from the president to the deparment head seems to help reduce bureaucracy. The bureaucracy which often makes the function of an organization inefficient can be eliminated by this delegation of power .

2. Teaching Support Services as being done at the University of Guelph , are somethings that should be followed . Quality education needs this sort of services which include helping the faculty staff to become a good teacher and utilize modern technology to assist students in learning.

3. Students resource centre as being set up at Guelph to help students who have problems in taking notes or writing reports etc. is another service that SUT should have for its students.

4. Department of Atheletics is another unit that Sut should have. That is to have sport facilities including coaches so that the students can participate in sport activities . It is even more important for SUT as almost all students are living in the campus.

5. Scheduling for classes and examinations are done manually using only 2 person is something that SUT should learn from Canadian Universities.

6. Average faculty workload at Canadian universities is about 2 courses per semester and not more than 12 contact hours per week. This should be a quideline for SUT to establish its own.

7. The steps and measures for the appointment of faculty staff from limited term to tenure especially at TUNS should be worth looking into in details. This includes also the promotion into academic ranks.

Report of SUT Staff Training / Mission in Canada

Type of training (more than one can be indicated) :

- ☒ Study Tour
- ☐ Short training course
- ☐ Other (specify)
- ☐ Attachment Programme
- ☐ Diploma / degree programme

* Name of trainee	:	Tavee Lertpanyavit
* Title / Position at SUT	:	Dean
* Name of Centre / Institute	:	Institute of Industrial Technology
* Length of Training	:	4 weeks
* Date of Arrival in Canada	:	Oct 2, 1993
* Date of Return to Centre / Institute	:	Nov 1, 1993

1. Describe the objectives of the training / mission

- Studying Canadian Universities' administrative Systems and organizations with emphasis on academic functions.

- Developing mutually beneficial institutional linkages between CUTC's and SUT through the various forms of co - operations.

- Discussing the preparation of the Joint International Undergraduate Program.

2. Describe any preparation undertaken before going (formal briefing , reading on Canada , reading of Project papers , meeting somebody etc.)

- Attend several PRC - Thai Sub committee meeting in preparation for the visit.

- Attend a half day seminar " Introductory View of Canada " organized by ARA Associates. (Bangkok office)

- Study the relevance documents.

3. Describe specific assignments given by the Centre / Institute to be completed during the training.

- To discuss the various aspects and requirements of curriculum design for the International Undergraduate Program with CUTC 's Institutions.

4. Outline activities undertaken during the training and highlight the most important aspect of the training.

-   Meeting with senior academic executives to discuss and exchange of ideas concerning academic administrative matters.

-   Meeting with academic staffs to discuss curriculum design.

-   Visit to various laboratories and libraries.

-   Participate in faculty meetings as an observer.

5. Describe what was learned or achieved during the training and highlight any related outputs of the training programme (describe fully and use additional sheet of paper if necessary).

-   System of governance as it relates to academic policy making and implementation.

-   Typical academic policies (e.g., promotion, graduation, student conduct, code of ethics, ownership of student work / projects, harassment, etc.)

-   Analysis of typical undergraduate and graduate admission policies.

-   Analysis of relevant students promotion / graduation policies.

-   University infrastructure and the system of administrative support functions (e.g., finance, registrar's office, human resources, purchasing, facilities planning, etc.)

-   Interuniversity interactions, standing and ad. / hoc. committees, senate, program and faculty based committees.

-   Faculty appointments, support staff appointments, full-time / part-time, limited term, tenure - track, tenure requirements and other academic appointments issues.

-   External relationships : Ministry, other universities, industry, advisory committees, and boards.

-   Enrolment planning mechanisms and associated human resource allocations.

-   Co - op planning and administration / interrelationships with undergraduate program administration.

-   Budget allocation and control mechanism, centralized / decentralized delegation of authority.

-   Research administration matters, policies, funding and resource allocation.

-   Procedures and mechanisms of curriculum planning /modifications / development and implementations.

-   Professional program accreditation procedures / liaison with licensing and governing bodies.

-   International programs / external applied research and service contracts.

-   Management issues and functions, authorities and responsibilities, morale and the collegial system of gevernance

6. Describe how the training and experience relate or contribute to any of the following :

6.1 *Long term / short term training at the Centre / Institute*

The development and implementation of the International Undergraduate Program and other related activities within the Institution.

6.2 *Intitutional Development and / or institutional strengthening of Centre and the Canadian institutions;*

The findings and results from the Study visit quite a number of the procedures and / or policies can be adopted or adapted by SUT.

6.3 *Strategic Planning Capacity of Centre / Institution*

SUT can benefit greatly from the vast experiences of it's CUTC partners to strengthen SUT's Strategic Planning Capability.

6.4 *Cooperation / Linkage with Canada / Canadian institutions.*

Cooperation with CUTC are expected in the following

- exchange of academic staffs for teaching

- sharing of informations through telecommunication linkage

- joint research activities

- joint consultancy services for Thai Industry.

- joint offering of short courses.

6.5 *Personal and professional development*

Personal and professional development can be done through this CIDA suported CUTC - SUT HRD Project. As well as through bilateral linkage among partner Institutions.

7. What are your reentry activities (projects or activities to be done upon return to the Centre / Institute) ?

- Report the outcome of discussions with CUTC - counterparts to the SUT President through PRC - Thai - Subcommittee.

- Report and discuss of International Undergraduate Program Curriculum design in the Board of the Institute of Industrial Technology.

- Planning of the acquisition of laboratory equipment.

- Prepared a list of teaching staffs consists of both SUT and from other universities.

8. **What is your assessment of the training (ie. programme, staff, facilities and administration of the Canadian institution, and cooperation / assistance provided to the trainee, etc.). Any problems, issues, or difficulties encoutered during travel, training or visits to various institutions?**

During the four weeks visit to University of Waterloo, Ryerson Polytechnic University and Technological University of Nova Scotia. The visitor has the opporturnity to meet Canadian Academic Administrators to disscuss matters and exchange ideas on various academic and administrative issues. The host Institutions have extended a warm and cordial welcome to the visiting guest. All the people met have shown keen interest of the topic discussed and very cooperative in every aspects.

9. **Any suggestions for improvement of any aspect of the training / mission**

Detail schedule for the visit as well as topics of discussion should be sent the visiting administrator before departure from Thailand to enable her / him to make any neccessary preparation in advance.

10. **Any general recommendations?**

The scheduled visit is first planned for 6 weeks, although it has been shorten to 4 weeks by request of the visitor. However the rearrange timetable can still cover all essential topics as planned and the outcome also quite comprehensive. So this seems to suggest that 4 weeks instead of 6 weeks as planned should serve the objectives.

Date : Oct, 26, 1994   **Signature** :

Report of SUT Staff Training/mission in Canada

Type of training (more than one can be indicate) :

- ☐ Study Tour
- ☑ Short training course
- ☐ Other (specify)

- ☐ Attachant Programme
- ☐ Diplona/degree programe

- ▲ Name of trainee : Mr. Apichai Tuanyok
- ▲ Title/Position at SUT : Scientist/Technician
- ▲ Name of Centre/Institute : Centre for Scientific and Technological Equipment
- ▲ Length of Training : 6 weeks
- ▲ Date of Arrival in Canada : October 15, 1993.
- ▲ Date of Retu re to Centre/Institute : November 30, 1993.

1. Describe the Objectives of the training/mission

1. To understand the theory of Scanning Electron Microscopy and Transmission Electron Microscopy.
2. To practice operation procedures and sample preparation techniques in Scanning Electron Microscopy and Transmission Electron Microscopy.
3. To be able to design and set up an Electron Microscopy Laboratory at Suranaree University of Technology.

2. *Describe any preparation undertaken before going (formal briefing, reading on Canada, reading of Project papers, meeting somebody etc.)*

I participated in cross cultural preparation conducted by CIDA (Canadian International Development Agency) and also attended and seminar in Electron Microscopy at Scientific and Technological Research Equipment Centre, Chulalongkorn University to improve the skill and experience of the training.

3. *Describe Specific assignments given by the Centre/Institute to be completed during the training.*

3.1   Operation of Scanning Electron Microscope and Transmission Electron Microscope

3.2   Many kinds of Preparation Techiques in Electron Microscopy

3.3   Management of lab and reseach facilities.

4. *Outline activities undertaken during the training and highlight the most important aspect of the training.*

4.1   Training in Biological Scanning Electron Microscopy at Food Science Department, University of Guelph for 2 weeks.

4.2   Traning in Biological Transmission Electron Microscopy (TEM) at Microbiology Department University of Guelph for 2 weeks.

4.3   Training in Material Science Electron Microscopy at Faculty of Engineering, Technical University of Nova Scotia.

5. *Describe what was learned or achieved during the traing and highlight any related outputs of the training programme (describe fully and use additional sheet of paper if necessary).*

To observe special reseach Techniques that would be useful at Suranaree University of Technology such as Immuno-Gold labelling Techniques.

6. *Describe how the training and exparience relate or contribute to any of the follwing :*

6.1 Log term/short term training at the Centre/Institute

The time for this training program was rather short. I recommend that future seminars be extended to 3-4 months. In this way, the material would be covered more throughly.

6.2 Institutional Development and/or institutional strengthening of Centre and the Canadian institutions ;

I would hope that the University can establish an Electron Microscope Service with the same level of efficiency and quality that I observed at the University of Guelph. The University should aim to provide wide service in this area.

7. *What are your reentry activities (projects or activities to be done upon return to the Centre/Institute) ?*

I plan to establish an Electron Microscopy Lab and research room referred to as the Centre for Scientific and Technological Equipment of Suranaree University of Technological.

8. **What is your assessment of the training (ie. programme, staff, facilities and administration of the Canadian institution, and cooperation/ assistance provided to the trainee, etc.). Any problems, issues, or difficulties encountered during travel, training or visits to variuos institutions ?**

At the University of Guelph and Technical University of Nova Scotia, I received a great deal of assistance and enthusiasm from all personnel and technicians involved as well as essential information repuried. However, I have encountered problems at the University of Guelph which may occur because of lack of advanced warning. The personnel and technicians involved in the training did not receive documents about the purpose of the training as well as the schedule until I was there. Therefore the laboratories only received short notice about the training program. This consed in convenience on the lab because had to set up a special program for me in addition to their busy schedule. In order to make the most of the lab training. I would like to suggest that notice should be given as early and clearly as possible before the trainee arrives to facilitate all personnel involved.

9. Any suggestions for improvement of any aspect of the training/mission

The University in Canada should be bether prepared to accept staff and rescarchers from Surananee University of Technology.

Date :   October 20, 1994.   Signature :   A. Tuanyoh.

Report of SUT Staff Training/mission in Canada

[X] Study Tour   [ ] Attachment Programme

[ ] Short training course   [ ] Diploma/degree programme

[ ] Other (Specify)

- Name of trainee   : Ms.Somsri Issariyanate

- Title/Position at SUT   : System Analyse

- Name of Centre/Institute   : Centre for Library resources and Educational Media

- Length of Training   : 2 Oct. - 13 Nov. 1993 (6 weeks)

- Date of Arrival in Canada   : 2 Oct. 1993

- Date of Return to Contre/Institute   : 13 Nov. 1993

1. Describe the objectives of the training/mission

    1.1 Library Automation systems of 3 - 4 colleges and universities, including those without branch library, those with branch library within the campus, and those with branch library outside the campus, as well as public library.

    1.2 Networking of library services

    1.3 Systems, services and facilities of the head quarters of DYNIX (At Waterloo)

    1.4 Archive system

2. Describe any preparation undertaken before going (formal briefing, reading on Canada, reading of Project papers, meeting somebody ect.).

    2.1 Formal briefing : The Pre-departure Orientation for Thai Trainees under the auspices of the Thai-Canada HRD Project, September 28, 1993 at the Technical Cooperation Facility Office, Bangkok 10500

    2.2 Tentative internary but these was no detail provided about places to visit and no information about the activities at each of the place.

3. Descripe specific assignments given by the Centre/Institute to be complete during the training.

    3.1 Study and training about library automation system,

    - software   - circulation

    - aequisition   - Serials

    - cataloging   etc.

4. Outline activities undertaken during the training and highlight the most important aspect of the training.

<div align="center">See attach</div>

Tentative Schedule for Ms. Somsri (At University of Guelph)

Oct. 4 (Monday)	P.M.	Dr. John Black	Arrives Guelph -- JB will meet at 5pm to take to dinner and to discuss program
Oct. 5 (Tuesday)	A.M.	Larry Porter	Tour of Library [Larry PORTER, Head, Library Automation and Technical Support] -- tour and basic outline of the operation of the Library
	P.M.	Dr. John Black and Larry Porter	Lunch - JBB/LTP -- early afternoon discussion with JB and selection of initial readings
Oct. 6 (Wednesday)	A.M.	Dr. John Black	JB - general discussion of plans for visit, outline of organization and structure of Library, further reading assignments [JB to arrange Library card, CoSy userid and general UNIX access]
	P.M.	Doug Horne	Internet/ CoSy/ CD-ROM - introduction and demo. Basic session on e-maill etc. [Doug HORNE, Library, General reference and CD-ROM Co-ordinator]
Oct. 7 (Thursday)	A.M.	Ralph Dachn	InterLibrary Loans/ ARIEL/ AVISO/ BILL [Ralph DAEHN, Librarian, Cataloguing Division & InterLibrary Loans Co-ordinator]
	P.M.	Ellen Tom	Acquisitions & Bibliographic Search -- process of acquiring materials including automated systems aspects [Ellen TOM, Head, Acquisitions and Bibliographic Search Division]
Oct. 8 (Friday)	A.M.	Larry Porter	Systems overview [L.PORTER]
	P.M.	Lorne Bruce	Collections Development [Lorne Bruce, Librarian Collections Division]

Date		Contact	Activity
Oct. 9-11		Dr.John Black	Weekend off -- Sunday night - Dinner with Black family 7 Maplewood Drive, Guelph [822-1774] -- Monday "autumn leaves scenic tour" - JBB with Dr.Kasem
Oct. 12 (Tuesday)	A.M.	Larry Portor	DYNIX - Waterloo (LTP has aranged visit)
	P.M.		Reference Services [Archives & Special Collections)
Oct. 13 (Wednesday)	A.M.	Dr. John Black	University of Waterloo Library tour [JBB arranging]
	P.M.	Alan Gale	Reference Services [Alan Gale]
Oct. 14 (Thursday)	A.M.	Les Richards	Teachnig Support Services [Les Richards]
	P.M.		Circulation & Reserve
Oct. 15 (Friday)	A.M.	Carolyn Pawley	Cataloguing [Carolyn PAWLEY, Head, Cataloguing Division, Louise Edwards, Barbara Bennett]
	P.M.	Alan Gale	Reference Services

Scdule of Meetings - October 20 to October 29, 1993

(At Ryerson Polytechmic University)

Oct. 20 (Wednesday)	A.M.	Richard	Administration
	P.M.	Joan	Audio Visual
Oct. 21 (Thursday)	A.M.	Richard	Administrative/Questions
	P.M.	Daniel	Circulation, Interlibrary Loan, Distance Education
Oct. 22 (Friday)	A.M.	Zita	Computer
	P.M.	Zita	Seraching
Oct. 25 (Monday)	A.M.	Eva/Ross	Technical Services. Cataloguing, Acquisitions,
	P.M.	Eva/Ross	Serials control
Oct. 26 (Tuesday)	A.M.	Eva/Ross	Technical Services. Cataloguing, Acquisitions, Serials Control
	P.M.	Ophelia	Information Serivces
Oct. 27 (Wednesday)	A.M.	Bob/Sally	Systems
	P.M.	Bob/Sally	DRA/Dynix Comparisons
Oct. 28 (Thursday)	A.M.	Claude	Archives
	P.M.		
Oct. 29 (Friday)	A.M.	Richard	Overview
	P.M.	Liz	

Tentative Schedule for Ms.Somsri (At University of Guelph)

Nov. 1 (Monday)	A.M.	Ellen Tom	Acquisition & Bibliographic Search
	P.M.		
Nov. 2 (Tuesday)	A.M.	Ellen Tom	Acquisition & Bibliographic Search and
	P.M.		CD-ROM search
Nov. 3 (Wednesday) Nov. 4 (Thursday) Nov. 5 (Friday)			Ontario Library Association Conference

Schedule of Meetings - November 8 to November 12, 1993

(At Ryerson Polytechnic University)

Nov. 8 (Monday)	A.M.	Bob	System
	P.M.	Zita	Computer Searching
Nov. 9 (Tuesday)	A.M.		Ontario College of Art (DYNIX)
	P.M.		
Nov. 10 (Wednesday)	A.M.		Toronto Public Library (DYNIX)
	P.M.		
Nov. 11 (Thursday)	A.M.	Zita	Computer Searching
	P.M.		
Nov. 12 (Friday)	A.M.	Zita	Computer Searching
	P.M.		

5. Describe what was learned or achieved during the training and highlight any related outputs of the training programne (descirbe fully and use additional sheet of paper if necessary).

The training was held at the libraries of the University of Guelph, the Unviersity of Waterloo, Ryerson Polytechnic University, the Ontario Collage of Art and the Toronto Public Library

Integreated Library Automation System Software

GEAC is a system has long been developed and used in the libraries of the University of Guelph and the University of Waterloo. DOBIS/LIBIS is a stem being used of Ryerson Polytechnic University, Because of the high maintenance cost of both systems and the high efficiency which users want, the three libraries are developing the old system to better ones. For example, the library of the University of Waterloo is going to use ISM instead of the GEAC. The Library of Ryerson Polytechnic Universtiy is going to use DRA system. The Ontario Collage of Art and the Toronto Public Library are stem being used DYNIX.

In order to developing the new integrated library automation system at Ryerson Polytechnic. Many software, for exxample DRA DYNIX VTLS INNOPAC were discussed and both system, DRA and DYNIX were selected. Finally DRA was the best choise for Ryerson Polytechnic, therefore

- DRA and DYNIX were the best library automation systems

- DRA and DYNIX were cheaper than INNOPAC and VTLS

- But many libraries which Ryerson Polytechnic has linkage, have been used DRA

6. Describe how the training and experience relate or contribute to any of the following :

6.1 Long term/short term training at the Centre/Institute

6.2 Institutional Development and/or institutional strergtheming of Centre and the Canadiam institutions ;

- SUT be sure to use the library automation system.

6.3 Strategic Planing Capacity of Centre/Institution

- Planning for working

- Planning for librarian and staff development

6.4 Cooperation/linkage with Canada//Canadian institutions

- Link to use the library catalog at Ryerson Polytechnic University through the internet

6.5 Personal and professional development

7. What are your reentry activities (projects or activities to be done upon return to the Centre/Institute) ?

   - To select the library software to fit for SUT.

   - To prepare librarians and library staffs development to be ready to use the library software and acquainted to network system, for example e-mail, internet, gopher, www.

8. What is your assessment of the training (ie. programme, staff, facilities and administration of the Canadian institution, and cooperation/assistance provided to the trainee, etc.). Any problems, issues, or difficulties encountered during travel, training or visits to various institutions ?

   Programme : General programs were O.K. but the Canadian rep. were not quite well prepare the training program for me.

9. Any suggestions for improvement of any aspect of the training/mission

   -

10. Any general recommendations ?

   -

   Date : Oct 25, 1994   Signature : Somsri Issaniyanti

SURANAREE UNIVERSITY OF TECHNOLOGY
NAKHON RATCHASIMA
THAILAND

Proposed English Curriculum
for the
International Program

Prepared and submitted by

    Dr. Puangpen Intraprawat
    Catherine Owens
    Suranaree University of Technology, Thailand

    Judy Hunter
    Ryerson Polytechnic University, Canada

Table of Contents

Statement of Purpose

The curriculum described below is the proposal submitted to the Canadian Universities of Technology Consortium and its member institutions for the English language course requirements for Thai students in the International Program of Suranaree University of Technology. It is proposed that English will be studied along with Engineering in the two years preceding selection for candidacy in Canadian universities. The program aims to prepare students to use the academic and communicative English language skills necessary for university level courses taught entirely in English.

A curriculum specifies not only what is to be taught but why it needs to be learned. The curriculum design process has thus made careful consideration of the stated needs and goals of the program and its stakeholders. The stakeholders include:
- the Thai students of engineering
- their peers of other nationalities
- the faculties of engineering and food technology at both SUT and the Canadian universities
- the Thai Ministry of University Affairs
- CIDA
- the parents of the students
- the future employers of the students
- the EFL teachers

These constituents have identified the primary objective of this program: to enable Thai and other Southeast Asian university students to complete their undergraduate engineering/food technology degrees in Canada, in four universities of technology. Success in reaching this objective will be determined by the following means:
- GPA of 2.7 in·engineering courses
- English proficiency
- the student's interest

Background Information

The students who enter this program are expected to be Thai, ranging in age from 17 - 19 years old. They use their mother tongue at home and on the campus. Their exposure to the English language will be limited to the classroom. It can be estimated that their present level of English is elementary in listening, speaking and writing skills, but may be low intermediate in reading. Their critical thinking skills are likely to be as yet unformed, as are their independence and initiative in learning.

The SUT campus has at present a homogeneous student body living together in residence. Hence, the language used for all forms of communication is Thai. In such an environment, it is predicted that the students will need English language training and support in order to make effective use of their engineering course texts, lectures given in English, and supplementary course materials. It is therefore strongly recommended that a series of English courses is offered concurrently with other courses in their academic discipline.

Course Design Constraints

1. Teaching Staff
    At least three professionally qualified teachers are required to teach each contingent of 120 students. These teachers need a Master's or doctoral degree in ESL education or applied linguistics and at least three years teaching experience. These teachers will be supported by a fully equipped resource center, staffed by a trained ESL librarian, a technician and tutors to give extra help.

2. Resources
    A well-equipped resource center will be available to both students and teachers. It should contain a language lab for listening and pronunciation practice, a computer lab, a reading area with reference material and supplementary course material, a video section with field-related tapes and a conference room. There should be space to accommodate up to 60 students plus staff at one time. A duplicating service is also recommended.

3. Class size and scheduling
    Language classes ideally have a maximum of 20 students per section. Given the context of low teacher numbers, lack of classroom availability and common Thai class sizes of 30, this course will allow up to 30 students per class. The intensive course will run three hours a day, five days a week for 13 weeks. The International English/Liberal Arts courses will run three hours a week for 13 weeks throughout the regular terms.

4. Operating Principles
    The principle which underlies the design of this English language component is that students without the language knowledge or ability necessary to complete a given course of study can be systematically trained to undertake the course with the same chances of success as others. The procedure followed is this:
    - assess the likely needs of the participants in the program
    - give them adequate preparation in meeting those needs by
        - involving them in learning processes
        - informing them of strategies and content
        - creating the context in which learning can take place

Curriculum Overview

Intensive English I	Exemptions for high proficiency students
International English/Liberal Arts 1	Required for
International English/Liberal Arts 2	all students
International English/Liberal Arts 3	"
International English/Liberal Arts 4	"
Intensive Orientation*	Required for candidates accepted in Canadian univ

These courses would run in the following terms for all candidates in the four engineering / food technology programs.

YEAR 1

Intensive I	Trimester 1 (May 23 - Aug 19)	15 hrs/wk	-> 195 hrs
Int'l Eng 1	Trimester 2 (Sep 19 - Dec 16)	3 hrs/wk	-> 39 hrs
Int'l Eng 2	Trimester 3 (Jan 16 - Apr 15)	3 hrs/wk	-> 39 hrs

YEAR 2

Int'l Eng 3	Trimester 1·(May 22 - Aug 18)	3 hrs/wk	-> 39 hrs
Int'l Eng 4	Trimester 2 (Sep 18 - Dec 15)	3 hrs/wk	-> 39 hrs
--	Trimester 3 (Jan 15 - Apr 14)	--	

YEAR 3

Intensive Orientation	(July - August)	30 hrs/wk	-> 180 hrs

Total: 531 hrs

*Intensive Orientation should be done in Canada.

<u>Course Syllabus Specifications</u>

Intensive International English I

This syllabus for Intensive International English I is aimed at Suranaree University of Technology students preceding their first year of study in the International Program, majoring in Chemical, Mechanical or Electrical Engineering or Food Technology.

Some of these students, after completing their first two years of study at SUT, will continue their programs at one of four Canadian universities of technology, viz., Ryerson Polytechnical University, Guelph University, Waterloo University and Technical University of Nova Scotia. The rest of the students will remain in Thailand to finish their program, where English is used exclusively as the medium of instruction.

Description: This course is a multi-skills, integrated academic language course. It includes five components:
- Active Listening for Academic Purposes
- Interactive Reading
- Study Skills
- Oral Proficiency in an Academic Setting
- Writing for Academic Purposes

The skills will be introduced and recycled throughout the course and the content will focus on topics related to the study of science and applied science. Skills are not used in isolation, and students will learn how to use information from a variety of sources, i.e., readings (textbooks, magazines, popular literature and industry documents) and taped or live oral input (videos, speeches, presentations) to generate questions, reports, summaries and study materials.

The course is held for three hours a day, five days a week, for 13 weeks in the trimester prior to beginning Engineering courses. An additional three hours a day is ideally used for assignments, projects and further study in the ESL Centre.

Learning Objectives

Listening

*listening to single utterances
*listening to the flow of English speech
*listening to classroom instructions
*listening to classroom interaction expressions
*listening to accented speech .
*listening to teachers posing questions
*lecture listening
*listening to peers' questions
*listening for ways to overcome communication breakdown
*using strategies for effective listening comprehension
*listening for communication cues
*listening for key words
*listening to improve pronunciation
*viewing listening as an interactive process

Component 1	Active Listening for Academic Purposes
Content	Listening Skills and Strategies

audition

1 initial listening skills
   .1 listening to the flow of speech
   .2 listening for knowns vs. unknowns
      .1 dealing with unknowns
      .2 grapho-phonemic correspondence
   .3 discriminating word junctures
      .1 syllabication
   .4 listening for names, dates and numbers
   .5 listening for emphasis, intonation
   .6 listening for repetition

meaning

2 comprehending emphasized items
   .1 stress, emphasis, restatement
   .2 beginning discourse markers
   .3 finding a thread
      .1 discourse patterns
   .4 listening for grammatical clues
   .5 matching script to speech

support

3 skills to support listening
   .1 echoing
   .2 note-taking
   .3 questioning meanings
   .4 guessing from context

text interaction

4 getting used to longer listening texts
   .1 preparing for listening
      .1 associations with topic
      .2 predicting topic and main idea

14

```
                            .3  questioning
                        .2  listening for specific information
                        .3  listening for general idea
                        .4  interacting with the listening text
                            .1  note-taking
                            .2  questions
                            .3  unknowns
                    .5  making further applications from text
                            .1  reaching conclusions
                            ,2  formulating other arguments
                            .3  suggesting other support
                            .4  non-verbal responses
                                .1  drawing charts, diagrams
                                .2  completing a project
                                .3  following directions

discourse           5  using the text to derive meanings
                        .1  whole/part relationships
                        .2  generalizing from examples
                        .3  induction / deduction
                        .4  discourse patterns
                            .1  cause & effect
                            .2  classification
                            .3  comparison & contrast
                            .4  reasons
                            .5  process
                    .5  discourse markers
                    .6  listening for the outline/organization

lecture listening   6  accustoming oneself to monologue
                        .1  rhetorical questions
                        .2  listening for asides, peripheral info,
                            jokes
                        .3  concentration
                            .1  predicting
                            .2  questioning
                            .3  associations
                    .4  guessing meanings from context

integration         7  using listening input
                        .1  to improve pronunciation
                        .2  for accent familiarization
```

15

6

Learning Objectives

Reading

*recognizing the importance of the written word
*viewing reading as an interactive process
*reading units of a text effectively
*reading for pleasure
*extensive reading
*analytical reading
*recognizing patterns of organization
*surveying a textbook
*reading non-verbal material
*reading different formats
*reading from the board
*reading exam questions

Component 2   **Interactive Reading**

Content   Reading Skills and Strategies

eye movement   1 changing the word-for-word reading habit
                         .1 reading in phrases
                         .2 selecting words to ignore
                         .3 sentence patterns

adjusting speed   2 discovering purposes of reading
                         .1 identifying general text types
                         .2 varying speed
                         .3 introduction to speed reading
                         .4 skimming and scanning

vocabulary   3 dealing with unknowns
                         .1 identifying context
                         .2 using context to associate, predict
                         .3 guessing meanings from context
                         .4 identifying word roots and suffixes
                         .5 developing an on-going vocab learning
                             system

text layout   4 surveying
                         .1 the parts of the page
                         .2 printing conventions
                         .3 the parts of a book
                         .4 bibliographic and reference materials

the reading process   5 using reading aloud
                         .1 intonation patterns
                         .2 stress
                         .3 transferring info to peers

```
scanning                6  finding info quickly
                          .1  knowing what to look for
                          .2  knowing where to look

skimming                7  generalizing
                          .1  finding the main idea
                          .2  identifying support

reading for detail  8  identifying facts
                          .1  inference & implication
                          .2  establishing relative importance of
                              facts, details

discourse               9  identifying discourse patterns
                          .1  cause & effect
                          .2  classification
                          .3  comparison & contrast
                          .4  reasons
                          .5  process
                          .6  exemplification
```

<u>Learning Objectives</u>

Study Skills

*knowing the characteristics of a good language learner
*identifying learning styles
*using learning strategies
*using academic resources
*effective exam preparation
*developing effective study habits

Component 3   **Study Skills**

<u>Content</u>   <u>Focus</u>

learning style   1 using English to learn English
                           .1   self and others
                           .2   communicative language teaching and
                                the role of the student
                           .3   competence building
                           .4   confirming, clarifying, questioning
                           .5   using simple English to avoid Thai

dictionary use   2 how to use a dictionary
                           .1   English-English
                           .2   English-Thai

                        3 when to use a dictionary

notes   4 taking good notes
                           .1   abbreviations
                           .2   marking a book

in your own words   5 paraphrasing, restating, summarizing
                           .1   avoiding plagiarism
                                .1   consequences of plagiarism
                           .2   discussing the assignment

exam taking skills   6 how to prepare for and take an exam
                           .1   revision
                           .2   following instructions
                           .3   pacing
                           .4   developing an answering strategy
                                .1   evaluate / assess
                                .2   criticise / justify
                                .3   give your own impression
                                .4   answering How? and Why?

non-verbal materials   7 reading graphs, charts, tables & diagrams
                           .1   drawing conclusions from materials

19

Learning Objectives

Speaking

*speaking at appropriate times in the class
*speaking in appropriate ways
*speaking clearly
*expressing conceptual meaning
*initiating, maintaining, and terminating discourse
*indicating the main point
*speaking with one's audience in mind
*distinguishing between Thai and Western ways of explanation
*using speaking as a tool to organize one's ideas
*speaking fluently
*speaking audibly
*speaking with a purpose in mind
*making an oral presentation

Component 4	Oral Proficiency in an Academic Setting
Content	Speaking Skills and Strategies

appropriateness
1 classroom language
    .1 when to talk, answer, ask, etc.
    .2 how to clarify, confirm, get someone's attention, work in pairs
    .3 how to make excuses, requests, objections
    .4 correcting

learning tools
2 using English to learn English
    .1 simplifying
    .2 rephrasing
    .3 pictures, gestures, movement
    .4 analogy, associations
    .5 peer support language learning strategies

oral presentations
3 preparing the presentation
    .1 questioning about the topic
    .2 collecting material
    .3 brainstorming
    .4 discussion
    .5 defining one's interest in the topic
    .6 establishing a thesis
    .7 reviewing the material
    .8 planning what to say

4 restatement
    .1 avoiding repeating original info
    .2 using your own words
    .3 looking at a topic from many angles

.4 deriving new info, conclusions from
            input

5   taking your audience into consideration

6   using A-V

7   reading from notes

8   giving the report
        .1 preparation of material
            .1 group/individual tasks
            .2 rehearsal
        .2 appointing a spokesperson
            .1 sharing tasks
        .3 projecting voice
        .4 audience participation
        .5 feedback and revision

<u>Learning Objectives</u>

Writing

*understanding the process of writing
*being responsible for one's own writing
*learning the importance of documentation
*learning to use reference books to perfect writing
*expressing sentential relations
*developing grammatical cohesion
*clarifying ideas using different formats
*using discourse markers
*transcoding information

Component 5   **Writing Academic Reports**

The process approach to writing requires students to become aware of writing as a developmental, self-initiated process. The course demands three or four papers, all following the steps below, gradually incorporating better control of subject treatment and language use. Organization is the prime factor.

1   Explanation of the writing process

    .1   student generated, student corrected

2   Steps in the writing process

    .1   selecting a topic
        .1   looking at background material

    .2   writing a thesis statement

    .3   determining how to support the thesis statement

    .4   gathering sources

    .5   planning
        .1   writing an outline
        .2   brainstorming
        .3   discussing, Reading, thinking

    .6   writing a first draft

    .7   revising

    .8   writing a second draft

    .9   writing a final draft

    .10   proofreading

    .11   presenting

22

International English/Liberal Arts 1

The course will follow the theme "Impact of Technology on Society" by introducing the concepts of the development of technology, social uses and awareness of technology, and professional responsibility for the appropriate use of technology. The course will also build directly on the reading, speaking, listening and writing skills introduced in the pre-course intensive. These four language skills will be expanded and extended so that students can gradually handle the kinds of assignments and classroom tasks expected of them in a Canadian 1st year Engineering course. Additionally, this course will reflect the thinking and processing skills used by university students to assess, react to and learn new material.

This course is held three hours a week, in two sessions, for 13 weeks, for a total of 39 hours. Homework and assignments will demand a minimum of three additional hours a week.

Content	Skills

What is technology?	1 identifying tools
	   .1 in agriculture
	   .2 in industry
	   .3 for social organization
	2 explaining how they work
	   .1 predicting
	   .2 questioning
	   .3 diagramming
	3 analysing technological systems
	   .1 finding weaknesses and strengths
	4 terminology and definitions

History of technology	1 using specific information
	   .1 to analyse present developments
	   .2 to predict future developments
	
	2 understanding the process of development
	   .1 cultural behaviour
	   .2 design features
	3 reporting and documentation

Thai technology	1 finding examples
	   .1 synthesising info from previous readings
	2 drawing comparisons with other cultural groups
	   .1 finding similarities and differences

14

```
                              3  discussion skills 1
                                 .1  group participation, interaction
                              4  drawing on personal experience

The application of Western
technology to Thai
ways of life               1  finding further information
                                 .1  using a text to learn more
                                 .2  library resources
                              2  working in groups to solve problems
                                 .1  generating questions
                                 .2  giving opinions and support
                              3  listening to contrasting views
                                 .1  judging on the basis of fact
                              4  writing a theme (2 page paper)


Cultural gain and loss
due to modern technology   1  analysis of argument
                                 .1  identify bias
                                 .2  purpose of writer
                                 .3  making inferences
                              2  reacting to a text in writing
                                 .1  making notes
                                 .2  pros and cons
                                 .3  restating the argument
                              3  listening to a debate
                                 .1  judging the merit of support
                              4  giving opinions about specific issues
                                 .1  understanding opposing views
                                 .2  supporting them


How society can adjust to
technological innovations  1  making critical judgements
                                 .1  questioning author's point
                                 .2  separating fact from opinion
                              2  critical listening
                                 .1  making inferences
                                 .2  drawing conclusions
                                 .3  reference to other sources
                              3  writing an essay reporting what others
                                    have said
                                 .1  citations
                                 .2  restatement

Technology and the
environment                1  identifying problems & solutions
                                 .1  stating the problem
                                 .2  predicting likely solutions
                                 .3  brainstorming
                                 .4  discovering new solutions
```

24

```
                      2  group work
                           .1  establishing causality
                           .2  discussing pros and cons
                           .3  developing further solutions
                      3  seeking further information
                      4  planning a solution to a local problem
                           .1  using statistics
                           .2  using charts and graphs

Benefits of Technology                    .
to Industry, Society
and Individuals       1  writing a report
                      2  presenting an oral report
                           .1  using graphs and charts
```

International English/Liberal Arts 2

This course will build on the resourcing, reading and thinking skills practiced in International English 1 by focussing on the theme of "Engineering Practice and Ethics" in a sheltered course with gradually increased complexity of input. The development of the critical and analytical skills needed to make use of this input is the goal. More abstract material is introduced to promote further awareness of the responsiblities demanded by the engineering profession. All skills will again be used by the students, but the main input will be aural academic lectures. This is to prepare students for the 50 minute monologues they will face in Canadian university Engineering courses.

Content	Skills

Engineering Practice and Ethics	1 comprehending information from a lecture
	  .1 how to listen to a lecture
	  .2 what to do with the info
	    .1 predicting
	    .2 matching input & predictions
	    .3 making associations

	2 comparing engineering practices
	  .1 thinking about safety
	  .2 cultural constraints

Responsibility for Human life	3 planning systems for safety
	  .1 flowcharts
	  .2 generalizing from examples
	  .3 accounting for constraints

	4 weighing options
	  .1 feasibility planning
	  .2 using background knowledge

Responsibility for the Quality of Life	5 concepts of protection
	  .1 prevention vs cure
	  .2 research practices
	  .3 cultural demands

	6 process
	  .1 using terminology
	    .1 clarifying terminology
	  .2 matching a diagram to input
	  .3 advantages/disadvantages

2b

Responsibility for the   7   cause & effect
Environment   .1   finding alternative causes
                                    .2   suggesting unforeseen effects
                                    .3   identifying chain reactions

                              8   classification
                                    .1   labelling
                                    .2   understanding hierarchies

Engineering and the Law   9   definition and the law
                                    .1   understanding whole-part
                                         relationships
                                    .2   standards

                              10 argument
                                    .1   thesis-support relationships
                                         .1   weak vs strong support
                                    .2   prevention of illegality
                                         .1   enforcement
                                         .2   public awareness

Looking at Alternatives   11 judging Thai models
                                    .1   advantages & disadvantages
                                    .2   using anecdotal evidence
                                    .3   using historical evidence

                              12 description
                                    .1   qualitative summaries
                                    .2   using diagrams/pictures

Judging Safety Procedures 13   analogy
                              •   .1   using imagery
                                    .2   cross-cultural considerations
                                    .3   literal vs metaphorical meanings

27

International English/Liberal Arts 3

This course introduces the theme of "Social change" and continues with academic language skills, demanding further mastery of thinking processes and responsibility for one's own learning. The focus shifts to oral and writing skills, with topics of importance to second year engineering students. Many concepts and processes in the manipulation of language are recycled from year 1 courses to encourage further development in the writing process, which needs continual reinforcement and practice.

Content	Skill
Social Change	1 writing an academic paper .1 planning .1 searching for sources .2 narrowing
History of Social Change: Thailand	2 discussing ideas .1 to help in the planning process .2 to gather further ideas .3 to focus
History of Social Change: Southeast Asia	3 writing the thesis statement .1 taking a position .2 identifying support .3 further searching .1 selecting relevant materials
History of Social Change: Asia	4 making a proposal .1 planning .2 raising questions .3 inviting criticism
Social Change and Development	5 writing an outline .1 clarifying the paper's intention .2 notes and ordering
Impact on Culture of Social Change	6 peer conferencing .1 showing interest in others' work .2 clarifying by explaining .3 asking questions requiring critical thinking
Benefits and Drawbacks to Society of Social Change	7 writing a first draft .1 getting ideas down on paper .2 ignoring form

Economics and Society   8   peer support
                                   .1 reading a friend's draft
                                   .2 offering useful vs useless advice
                                   .3 finding the thread
                                   .4 focussing on content

Politics and Society   9   writing a second draft
                                   .1 letting it rest
                                   .2 searching for more sources
                                   .3 finding weaknesses
                                   .4 rearranging sections

Thailand's Industrial   10   oral presentation
Development   .1 planning
                                   .2 pacing
                                   .3 practicing
                                   .4 presenting

A Model for beneficial   11   writing a final draft
Social Change   .1 text coherence
                                   .2 unified paragraphs
                                   .3 appropriate text organization
                                   .4 effective use of secondary
                                       sources

                              12   peer proofreading
                                   .1 grammar
                                   .2 vocabulary
                                   .3 punctuation
                                   .4 page format
                                   .5 typing conventions

International English/Liberal Arts 4

This course reinforces language use, critical thinking, the academic skills and emergent awareness of theoretical and practical issues to give students the chance to develop strengths in the analysis of relevant fields of inquiry. "Engineering problems in Thailand" is the primary focus, while concepts from economics, ecology and sociology in Thailand are used to increase the students' awareness of the value of thinking about his/her field in light of modern international problems. Further written and oral practice enhance the students' ability to approach the kinds of tasks they will be faced with in Canadian universities in year 3. The course will be organized on the module plan, with a variety of topics within each module, so that students can select their focus of interest and do research independently.

Module   Topic/Skill

Economics   1 Thai national economics
                                .1 impact on society
                                .2 impact on engineering planning
                                .3 impact on implementation
                           2 Thai labour practices and training
                                .1 supervisory models
                                .2 cost effectiveness
                           3 Economic constraints for engineers
                                .1 training
                                .2 material support
                           4 case studies in Thai economics

Ecology   1· the systemic nature of ecology
                                .1 impact on engineering planning
                           2 project implementation for the
                                maintenance of ecological balance
                                .1 principle of cost vs loss
                           3 environmental protection engineering
                           4 Buddhism and the environment
                                .1 using ingrained cultural values
                                    in training
                           5 case studies in Thai ecology

Sociology   1 using sociological principles
                                .1 to assess impact
                                .2 implement projects
                                .3 design infrastructure
                           2 analysing Thai social organization
                                .1 in terms of development
                                .2 impact on engineering planning
                           3 community project models
                           4 case studies in Thai social problems
                                with relevance to engineering

30

21

บันทึกข้อความ

หน่วยงาน สาขาวิชาภาษาอังกฤษ
ที่ ทม. 5112(3)/109   วันที่ 9 ธันวาคม 2536
เรื่อง รายงานการปฏิบัติงาน ณ เมืองโตรอนโต ประเทศแคนาดา

_____

เรียน   ประธานอนุกรรมการกำกับการโครงการความเชื่อมโยงและร่วมมือทางวิชาการ
           SUT-CUTC

           ตามที่ดิฉันและอาจารย์ Caterine Owens ได้เดินทางไปปฏิบัติงาน
ณ เมืองโตรอนโต ประเทศแคนาดา ตั้งแต่วันที่ 30 ตุลาคม - 28 พฤศจิกายน 2536 นั้น
บัดนี้ การปฏิบัติงานในช่วงเวลาดังกล่าวได้เสร็จสิ้นลงแล้ว ดิฉันจึงใคร่เสนอรายงานการ
ปฏิบัติงานตามเอกสารต่าง ๆ ที่แนบมานี้
           เอกสารหมายเลข 1 -   ปฏิทินการปฏิบัติงาน
           เอกสารหมายเลข 2 -   เค้าโครงหลักสูตรนานาชาติของรายวิชาภาษาอังกฤษ
           เอกสารหมายเลข 3 -   รายงานเรื่อง ESL Centers
           เอกสารหมายเลข 4 -   เอกสารการเจรจากับ Dr. Stalin Bockter,
                               Chair of the Faculty of Engineering,
                               Ryerson Polytecnic University.
                               เกี่ยวกับเค้าโครงหลักสูตรวิชาภาษาอังกฤษ
           เอกสารหมายเลข 5 -   รายงานผลที่ได้รับในการปฏิบัติงานและข้อเสนอแนะ
หมายเหตุ   เอกสารทุกฉบับ ยกเว้นเอกสารหมายเลข 3 ได้นำเสนอ
ในการประชุมที่ Ryerson International จัดขึ้น เมื่อวันที่ 23 พฤศจิกายน 2536
เวลา 13:00 -14:00 น. โดยมีผู้เข้าร่วมประชุมดังนี้
     Prof. Sam Mikhail,   Director, Ryerson International   ประธาน
     Mrs. Marsha McEachrane-Johnson, Associate Director
     Dr. Stalin Boctor, Chair, Department of Electrical
                          Engineering
     ผศ. ดร. พวงเพ็ญ อินทรประวัติ   รักษาการหัวหน้าสาขาวิชาภาษาอังกฤษ มทส
     Ms. Catherine Owens   อาจารย์ มทส
     Ms. Judy Hunter   ESL   teacher,
                                    Ryerson Polytecnical University
     Dr. Margaret Morriss   Teacher,
                                    Ryerson Polytechnical University

              จึงเรียนเสนอมาเพื่อโปรดทราบ

เรียน ห้องหกส่งมวิทยฯ
เพื่อรวบรวม มหเมณลปหาดใน สีงกพ
                                              (ผ.ศ. ดร. พวงเพ็ญ อินทรประวัติ)

- 9 ธ.ค. 2536

Suranaree University of Technology
Nakhon Ratchasima
Thailand

Report

November 1993 ESL Study Tour

Submitted by

Dr. Puangpen Intraprawat
Catherine Owens

This report includes the agenda we followed weekly in and around Toronto for the period November 1 through November 27, 1993. Our comments regarding the nature of each activity and what we learned from them are reported here.

Academic Activities

1. observing classes
   - ESL classes at Ryerson and York universities
   - Engineering classes at Ryerson - 1st and 3rd year electrical engineering

The classes we observed in Engineering were the most informative input we had in terms of designing our curriculum for EFL. Classroom language, teacher's instructions, modes of explanation, use of idiomatic language, student-teacher interaction and student behaviour were all aspects we found important in determining how to prepare our Thai students for eventual admission to such a context.

2. visiting ESL collections, resource centres and libraries
   - HUB (the York Board of Education) self-access centre
   - the Metro Central Reference Library ESL holdings
   - the Modern Language Center at OISE
   - the ESL center at Fanshawe College, London
   - the ESL center, intensive program at University of Toronto

The various collections gave us an overview of how ESL programs view the self-directed learning aspect of language teaching. We found a wide use of print materials, some interactive computer disc materials, some computer-assisted learning exercises, and certain kits and workbooks. It is self-evident, and thus confirmed by these visits that the student needs
      i) motivation
      ii) incentive
      iii) time
to use the materials in a self-access centre. By and large, the students using the centres in Ontario that we visited are adults. In Thailand, we have the added challenge of making a centre attractive to teenagers, in an EFL, as opposed to ESL, environment with materials tied to their language learning curriculum and interests.

3. Discussions with ESL professionals
    - Neil Naiman, Glendon College, York University
    - Lou Buchanan, Ryerson Polytechnic
    - Maureen McNerney, York University English Language
        Institute
    - Ian Martin, Glendon College, York University
    - David Mendelsohn, York University Faculty of Arts,
        English as a Second Language Program
    - Elizabeth Taborek, Toronto Board of Education

All of these ESL professionals were in agreement on one particular point. That was: the absolute requirement of on-going ESL language classes as essential to the

    i) immediate abilities of Thai students to learn
        from engineering courses given in English in
        Thailand
    ii) the eventual capacity for success in engineering
        courses in Canadian universities

These are the teachers who have contact with the second language students at Canadian universities. They report that many second language students do not approach their course subject teachers when they need help. As a result, many subject teachers are not aware of the students' lacks until it is too late.

4. Meetings with the engineering faculty at Ryerson
    - Dr. Stalin Boctor, Chair of Electrical Engineering
    - Dr. Yao-C Chen, Professor of Electrical Engineering
    - Dr. Yuri Silmberg, Professor of Electrical Engineering

These meetings were invaluable as the individual professors pointed out to us the pitfalls and problems foreign students have in the Engineering program at Ryerson, along with the challenges such students face. They confirmed as imperative our intention to provide ongoing critical thinking, language training, and academic skills courses to our Thai students.

5. Working on the curriculum for English language for the
        International Program at SUT

This was a continuous process, taking up many hours of writing, discussion, feedback and revision. It was a great opportunity for us to concentrate clearly on the job at hand, and we are grateful for the time we were given. The document created is, as all curricula, a beginning, and will be revised many more times before it is implemented. It will be revised again on the basis of on-going evaluation.

6. Materials assessment and procurement
   - Nelson Publishers
   - TESL Ontario Conference

This is an essential element of our time here, in view of the limited resources available in Thailand. We would like to start our resource centre with a good selection of what is on the market here in terms of workbooks, reference books, audio tapes, video tapes, computer software and authentic materials usable in the language learning context.

7. Attendance at the TESL Ontario Conference

As this occurs at the end of our stay, this report cannot cover it. We are sure that there will be numerous opportunities to review our planning, discuss with professionals, hear about recent developments in our field, and search for more materials.

8. Working with the ESL coordinator at Ryerson

This has been most helpful to us in terms of communication, clarifying our ideas, revising the curriculum, discussing perceived needs and wants for the students who will be coming to Canada. A contact person is essential at all four universities for the eventual placement of students and for the ongoing communication of program developments and requirements.

Recommendations for future visits

We can report some activities that we did not have the opportunity to do, and would have found useful:

1. meeting with engineering/food technology professors
   from all universities involved in this project
This might have clarified differences in programs, in orientation to foreign students, in EFL support, etc.

2. meeting ESL co-ordinators from the other universities

3. seeing the engineering curriculum on paper, as proposed by
   the committee of engineering faculty from all five
   universities
This might have helped in our planning, possibly to help with modifications to include the EFL component we recommend. This also might give us insight into planning what will happen to the students who do not come to Canada.

4. knowing in advance the numbers and types of students we
   will be dealing with, for obvious reasons.

SUT ESL Study Tour at Ryerson
Agenda for Week 1: November 1-5

NOVEMBER 1 MONDAY

9:00-11:00 am
Orientation meeting with Judy and Marg.
Overview of current developments at SUT ESL
Objectives and themes of the month's agenda

11:00 am-2:00pm
Campus tour (Marg) and lunch (Marg and Judy)

2:00-3:00 pm
Set-up in the office   (Judy)

NOVEMBER 2   TUESDAY
9:30 meet Judy

10-11 am
ESL Class observation   Judy
Focus on activities, content, language, student and teacher roles
How do these relate to EAP needs for RPU students?
How could they be adapted or be useful to SUT students?

2-4 pm
The Hub: York Bd of Education Resource Centre
Joanne Wrey (394-3424)   Accompanied by Marg
What selection processes and criteria does the Board follow for its
ESL resource holdings?
How might they be relevant to your instructional and access centre
needs at SUT?

NOVEMBER 3   WEDNESDAY

9:30am-2:00pm (with breaks)
Meeting with Judy regarding needs at SUT, refining the month's
agenda and objectives

3-5 pm
Metro Central Reference Library ESL Collection, 5th floor
meet with Laura Soto-Barra (393-7172), accompanied by Marg
What selection processes and criteria does the Metro Library follow
for its ESL resource holdings?
How might they be relevant to your instructional and access centre
needs at SUT?

NOVEMBER 4   THURSDAY

10:30 am
Meeting with Neil Naiman, Director of ESL, C212 York Hall, Glendon
College, York University   (736-2100 x88161)
The Glendon EAP programme, objectives, curriculum approach, range
of courses and placement testing

How are course offerings and curriculum designed to meet the
objectives of students enrolment in mainstream English content
courses?   How does the approach differ from traditional skills
approaches?

How is the placement test designed to match student needs with
courses?

How are these features of the Glendon programme applicable to SUT?

2:00 pm
Meeting with Stalin Bockter, Electrical Engineering, RPU
Accompanied by Judy
Arrangements for class observations, discussions with Engineering
faculty and ESL students in the programme

NOVEMBER 5   FRIDAY

Morning: open

2:15 pm
Meeting with Lou Buchanan: discussion of Ryerson Proficiency Test
Objectives, design, content, relevance to academic language use
In what ways might any aspects of this test be useful to SUT?

2

SUT ESL Study Tour at Ryerson
Agenda for Week 2: November 8-12

NOVEMBER 8 MONDAY

9:00-11:00 am
Curriculum design: meeting with Judy

1:00 pm
Proposal for programme design: with Marg and Judy

NOVEMBER 9   TUESDAY

York University English Language Institute all day

10:00 am   Meet Maureen McNerney, Director
            287 Winters
Curiculum of EAP programme, testing, streaming, objectives and
materials How do these aspects of the programme meet the needs of
pre-university students at York?   How are they relevant to STU
students?

Afternoon Classroom observation: Margaret Lasserre and Barbara
Abrams
Get location and directions from Maureen or Anne Friedman, YUELI
Secretary
How is the programme delivered?
Focus on activities, content, language, student and teacher roles
How do these relate to EAP needs for RPU students?
How could they be adapted or be useful to SUT students?

NOVEMBER 10   WEDNESDAY

Morning or afternoon
Meeting with Judy: SUT programme and Curriculum

Tentative meeting with Ryerson International

NOVEMBER 11   THURSDAY

Morning: open for writing

11:30 Lunch meeting Ian Martin and Judy

1:30 Meet Stalin Bockter, Electrical Engineering, accompanied by
     Judy
1:30 Meeting with Prof. Yao-C Chen, Room 240
2:00 Classroom observation, Prof. Juri Silmberg, 1st year, T142

3:00 Classroom observation, Prof. Yao-C Chen, 3rd year, T142
4:00 Meeting with Prof. Silmberg, Room 221
4:30 Debriefing with Stalin Bockter

Focus on needs analysis: teacher-student roles and relationships, expectations and demands on students, task analysis and evaluation criteria, language needs

What kinds of preparation will SUT students require to function effectively in RPU settings like these?

NOVEMBER 12 FRIDAY

10:45-12:30 Seminar on TEIL in Thailand at Glendon, Ian Martin C226
Questions:
What directions is Thailand taking in ELT?
What challenges does the profession face?
How are current ELT approaches like communicative competence realized in the EFL setting of Thailand?

12:30 Lunch at Glendon with Ian and perhaps others

Afternoon: Meeting with Ryerson International (if not Wednesday)
Open for writing

NOVEMBER 15 MONDAY

9:00-11:00 am
Curriculum design: meeting with Judy

Afternoon
Nelson Publishers, 1120 Birchmont Rd.
Visit to warehouse for inspection of ESL materials and possible
purchasing (Contact person: Jenny Faulkner)

NOVEMBER 16 TUESDAY

11:45   Meet with David Mendelsohn
           York University Faculty of Arts English as a Second
           Language Programme, 544 Ross South

EAP programme: Curriculum, testing, objectives and materials How
do these aspects of the programme meet the needs of university
students at York? How are they relevant to STU students?
The ESL Access Centre: organization, staffing, objectives, mission
Adjunct ESL Tutorials: delivery, staffing, curriculum, kind of
support for ESL

How are these courses and support models adaptable or useful to SUT
needs?

Afternoon: Curriculum Work

NOVEMBER 17 WEDNESDAY

9:30 am   Modern Language Centre Resource Centre, OISE
                Meet with Alice Weinrib, 10th Floor, and view
                collection
How are new materials discovered and obtained? What selection
criteria are followed?

1:30 pm   Elizabeth Taborek, Toronto Board of Ed., Bickford
                Centre, 777 Bloor W., Rm. 305
                Accompanied by Judy

Discussion of national Benchmarks testing. What are the purposes of
this test design? What does it show in terms of language competence
and performance? What are its underlying assumptions about
language, language learning, and language use? How useful could

this testing concept be for SUT placement or proficiency?

NOVEMBER 18   THURSDAY

Morning: Curriculum work

1:00 pm - 3:00 pm   Meet Vivian McDonough, English as a Second
                       Language Intensive Programme,   School   of
                       Continuing Studies, University of Toronto
                       3rd Floor   accompanied by Judy

EAP intensive programme: Curriculum, testing, objectives and
materials How do these aspects of the programme meet the needs of
university students at York?   How are they relevant to STU
students?

NOVEMBER 19   FRIDAY

Fanshaw Community College, London all day
11:00 am   Meet Christine Nath, Language Centre, 35 7-Up Ave.
                      Look   at   organizational   features   of   the   ESL
                      programme, view two access centres

How are ESL students effectively placed and moved through the
programme? How are different levels within classes and different
rates of progress dealt with?   How are resource centres and
multimedia work integrated into the programme?

6

NOVEMBER 22 MONDAY

All day
Puangpen: Research at Modern Language Centre Library, OISE
Kate: Curriculum work at Ryerson
Judy: Consultation on curriculum throughout the day

NOVEMBER 23 TUESDAY

Morning

Curriculum work

1-3 pm

Meeting and presentation of reports and curriculum with Ryerson
International

NOVEMBER 24 WEDNESDAY

All day
Final wrap up
Review and discussion of month's activities and ongoing needs for
SUT EFL programme

NOVEMBER 25 THURSDAY

All day: TESL Ontario Conference

NOVEMBER 26 FRIDAY

All day: TESL Ontario Conterence

NOVERMBER 27 SATURDAY

All day: TESL Ontario Conference

ESL Center หรือ Language Resource Center

ในการเดินทางไปปฏิบัติงานที่เมืองโตรอนโต ประเทศแคนาดา ดิฉันอาจารย์ Catherine Owens ได้มีโอกาสเยี่ยมชม ESL Centers (บางแห่งเรียกชื่อต่างออกไป) ของสถาบันการศึกษาต่าง ๆ ที่เป็นของวิทยาลัย 2 แห่ง (Franshawe, Seneaca College) ของห้องสมุด 2 แห่ง (Hub, Metro) และของมหาวิทยาลัย อีก 2 แห่ง (University of Toronto, York University) จึงใคร่จะขอจำแนก ESL centers ออกเป็น 3 ลักษณะดังนี้

1. ESL center ที่มีแต่เฉพาะห้องอ่านหนังสืออย่างเดียวสำหรับให้ครูและนักศึกษาค้นคว้า

2. ESL Center ที่ประกอบขึ้นด้วยชั้นวางหนังสือสำหรับครูและสำหรับนักเรียนแยกกัน มีเครื่องคอมพิวเตอร์และสื่อการเรียน มีเครื่องบันทึกเสียงสำหรับให้นักเรียนฝึกหัดออกเสียง เครื่องรับโทรทัศน์พร้อมทั้งเครื่องฉายวิดีโอ

3. ESL Center ที่ใช้อุปกรณ์ประเภท multimedia ซึ่งประกอบด้วยอุปกรณ์พื้นฐานที่จำเป็นต่อไปนี้ คือ

   เครื่องคอมพิวเตอร์ (ใช้ floppy disk drive)
   หูฟัง
   เครื่องไมโครโฟน
   เครื่อง file server 1 เครื่อง (ซึ่งประกอบด้วย hard disk,
        digittizer, transmitter)
   เครื่องเล่น CD Rom 1 เครื่อง
   เครื่อง Video Blaster 1 เครื่อง
   เครื่องฉายวิดีโอเทป 1 เครื่อง
   เครื่องบันทึกเทปคาเล็ท 1 เครื่อง
   สื่อการเรียนที่ใช้กับเครื่องคอมพิวเตอร์ เช่น
        reading- Rhubarb
        grammar- Grammar Master
        Vocabulary- Double-Up
        Listening
        Punctuation เป็นต้น

ESL center ที่มีอุปกรณ์การสอนประเภทนี้สามารถใช้เป็นห้องเรียนที่สามารถสอนนักศึกษาได้ทั้งกลุ่มเล็กและกลุ่มใหญ่ การสอนโดยการใช้อุปกรณ์ประเภท multi-media ข้างต้นนี้ยังเป็นเรื่องใหม่สำหรับวงการสอนภาษา แต่ก็มีแนวโน้มที่จะเป็นที่นิยมอย่างแพร่หลายในโอกาสต่อไป และได้ทราบมาด้วยว่า สถาบันภาษาของจุฬาลงกรณ์มหาวิทยาลัยและ Seneaca College ในประเทศแคนาดากำลังเสนอขอความช่วยเหลือจากรัฐบาลแคนาดาเพื่อที่จะจัดสร้างศูนย์ภาษาที่มีอุปกรณ์ดังกล่าวขึ้นในประเทศไทย

TO: Dr. Stalin Boctor, Chair, Electrical Engineering

The representatives from the English School at SUT have been in Toronto for almost two weeks, visiting ESL centres and discussing curriculum development for the SUT\CUTC International Program with us at Ryerson. We understand that you have been consulting with the other member universities about the professional curriculum for these students, and that there has been some discussion of omitting required credit courses in ESL from their programs. We are concerned that this issue receive further consideration from the curriculum planners.

We believe that the best way for students to learn English is within the academic context, so that ESL courses run concurrently with their program studies. The Needs Assessment carried out for the International Program at Suranaree University of Technology last August recommended, in brief, that the program include:

> a 10-12 week immersion\intensive course in ESL, to be taken by students before beginning their regular studies

> four required one-term courses in ESL, all of which emphasize the four proficiencies of reading, writing, speaking and listening, with a growing component of ESP, during the first two years of study at SUT

> some mechanism of review (whether by testing or interview) to assure that students who wish to spend their third and fourth years studying in Canada are indeed sufficiently proficient in English to undertake such studies

> four required one-term ESL courses, to be chosen from a slate of specialized ESL courses, in the third and fourth years of study, for those who do not transfer to Canadian Universities but who wish to continue improving their language proficiency

> the development of a Self Access Centre, where both the regular program students and the international students can pursue the acquisition of English by self-directed or faculty-directed study

> subsequent to the Needs Assessment Report, we have seen the need for a 6-8 week

English Language immersion program, to be offered in Canada for students after second year who will study at one of the consortium universities. Such a course would work on improving the students'oral proficiency, as well as introduce the student to life in Canada.

It is crucial that the International students learn English, not only in an intensive introductory course, but also within the academic context of their studies. In other words, required ESL courses during the regular term should be seen not as a "burden" or an additional demand upon the heavy timetables of the students, but rather as a means to facilitate their learning in their professional courses. When ESL is taught within the scope of the whole curriculum, students have the best opportunity to succeed in their program which will after all be taught in English. Since students will need help with English across the curriculum, a required ESL course will provide the support students will most need

The three-semester curricular pattern at SUT allows more room for required ESL courses to be presented effectively. Moreover, the regular students at SUT have a requirement of fifteen credits in English. It would seem incongruous if the students studying in Thai received more language instruction than those students who are studying in English; there is as well a virtue in preserving consistency among curricular programs at SUT. If regular students must complete 15 English credits, then so should the international students. Most Canadian Universities have some form of Liberal Studies requirement in their curricula; perhaps the SUT\CUTC negotiating team could arrange to use the ESL credits as Liberal Studies credits.

The major challenge for the English School at SUT is to help the international students achieve a level of language proficiency adequate to the demands of study in Canada. It is not possible at the present time to determine the proficiency level of the students who will enroll in the international program. Hopefully, many such entrants will have better-than -average English proficiency, but in the absence of hard data we can only assume that these students will, as a group, present a wide range of abilities, from poor to fair. To judge from evaluation of current SUT students, one or two intensive courses, however designed, simply will not allow the achievement of the desired goal.

While in theory it may seem reasonable to offer non-credit ESL support to the international students during the regular school term, in fact students will not regard this support as a fundamental component of their education. If administrators and curricular planners regard ESL support as non-creditable, the students will adopt the same scale of relative values. Indeed, what choice have they, given the demands of their professional

programs?

Given all these considerations, we would urge that the curricular design of those programs participating in the SUT\CUTC agreement follow the pattern originally recommended by the ESL Needs Assessment. Now that teachers from the English School at SUT have undertaken face-to-face planning discussions with their counterparts at Ryerson, we are all the more convinced that the interests of the students and the long-term interests of the international program would be best served in this way. Therefore we are currently working on proposals for the initial intensive course, as well as designing four one-term courses in ESL for the first two years of the international program. While these are the immediate concerns of our planning, some consideration will also be given to the means of assuring language proficiency at the end of the first two years to students planning to study in Canada.

[signature]	Chair Dr. Puangpen, Acting Director, School of English SUT
[signature]	Kate Owens, Faculty Member, School of English, SUT
[signature]	Judy Hunter, Faculty Member, English Dept., RPU
[signature]	Marg Morriss, Consultant, SUT\CUTC Project

REPORT OF SUT STAFF TRAINING MISSION IN CANADA

<u>Type of training</u>

√ Study Tour

Name of trainee: Catherine Owens
Title/position at SUT: Ajarn, School of English
Institute: Institute of Social Technology
Length of training: 1 month
Date of Arrival in Canada: October 31, 1993
Date of return to Centre: December 16, 1993

1. Objectives of mission
- to develop a curriculum for the English language component of the International Program
- to acquire materials for EFL to use in SUT's English Language Resource Unit
- to observe the design and equipment of learning centres at Canadian universities

2. Preparation before going
- one meeting with SUT's Vice-President for Planning to establish goals and clarify concerns regarding SUT representatives' authority for decision making re: curriculum matters and hiring.
- reading the report submitted in August 1993 by Dr. Margaret Morris, outlining needs and interests of the program

3. Specific assignments given by the Institute to be completed
- as above: the submission of a completed curriculum document for the English language component of the International Program

4. Outline activities undertaken during training
- meetings with Ryerson EFL teachers to discuss curriculum needs
- visits to EFL learning resource centers throughout Toronto
- meetings with Ryerson Engineering teachers to discuss curriculum needs
- **writing the curriculum (most important)**

5. Describe what was learned and highlight related outputs
Being Canadian, and having taught EFL at two Canadian universities, I was already familiar with the scope and inadequacies of programs there. EFL learning resource centers function there, as here, solely due to the enthusiasm of the teachers or personnel involved, but were all constrained by budgets. Chiefly of interest was the classroom observation of engineering classes, where we saw and heard the level of English used, and compared it to the English proficiency of university students in Thailand. My output was the 26-page curriculum written to describe the five courses we saw as essential to the program.

6. How the training and experience relate to:
6.1 Long term/short term Activities at the Institute
- the development of the International Program Curriculum for English made me aware of how curriculum design requires input from all interested parties, and administrative support

6.2 Institutional Development and/or Institutional Strengthening
- Canadian engineering profs were given the opportunity to hear from EFL teachers what the likely language level of incoming students would be, thus clarifying a few misconceptions. SUT EFL teachers were given the opportunity to attend engineering classes to determine the proficiency levels their students would have need of.

6.3 Strategic Planning Capacity of Institution
- with the expressed desire and a clear academic need for a self-access (EFL) centre for SUT, the mandate for planning and implementing this became the responsibility of the School of English. It was found that planning at SUT needs to be more strategic; more careful consideration of personnel, budgetary and pedagogical constraints needs to be given.

6.4 Co-operation / linkage with Canadian Institutions
- the experience contributed to my understanding of the communication between SUT and CUTC, and that it needs improvement. At times, SUT proposals, needs and desires are not clear to the Canadians. Canadian faculty need clearly written and informative documentation to help with bilateral decision making.

6.5 Personal and professional development
- pointed out to me the wide diversity between the experiential domain of a Canadian EFL professional and one in Thailand, and how broader exposure to language teaching in a new or different environment could be of great benefit to our teachers and our program.

7. What are your re-entry activities?
- complete the curriculum
- convince the content teachers of the need for EFL in the curriculum
- write the materials to teach the courses
- establish entry and exit proficiency levels
- write the various examinations needed for the courses
- prepare the EFL centre to supplement classwork

8. Assessment of the training/cooperation: problems, issues, or difficulties
I received no training, but was there to do a job, which I did. Judy Hunter of Ryerson's English Department was extremely helpful, well- prepared and competent in her suggestions for making use of our time. The Electrical Engineering Faculty at Ryerson Polytechnic were also very helpful.

9. Any suggestions for improvement of any aspect:
Further visits by Thai EFL teachers should include much more actual classroom teaching. This experience could be a great benefit to SUT teachers who want to prepare their students for the kinds of language, social, and learning environments they will encounter.

10. General recommendations:
1. Clarify much more succinctly who is going on such a mission and what they need to accomplish.
2. Propose an itinerary of educational, report-writing and collaborative projects for them to complete.
3. Select people who will actually learn something from the visit, and whose English is proficient.
4. Suggest to Canadian counterparts how Thais like to be treated: chauffeured from place to place, given sight-seeing trips, welcomed at official receptions, paid attention to. More than one Thai professor complained how they were being left alone by their hosts, which is, of course, the way Canadians like to be when they travel.

Oct. 20, 1994

SUT\CUTC PROJECT - NEEDS ASSESSMENT FOR
ESL PROGRAMS

Submitted by Dr. Margaret Morriss
August 10, 1993 at SUT
August 13, 1993 at RI

CONTENTS

I.

SUT Mandate

The university's mandate includes the following: [1]

> 1. The development of scientifically and
> technically qualified personnel in areas
>> such as agriclture, industry, natural
>> resource utilization, environmental con-
>> servation and the social sciences.
> 2. Research for the development of scientific
>> knowledge for the nation as a whole.
> 3. Technology transfer, adaptation and develop-
>> ment, to help Thailand towards self-reliance
>> in technological development.
> 4. The dissemination of knowledge to the public.
> 5. The preservation of the national and regional
>> cultural heritage.

II SUT Mission

> The University's mission is to serve the
scientific and technological education needs of its
locale (Korat and environs); the region(the four
provinces which make up the country's biggest yet
> poorest area of Thailand); the nation (Suranaree
> University enjoys a unique independence, yet will
> eventually form agreements with Thailand's other
> technical universities); the international scene
> (SUT's location in Korat makes it the gateway to
> Indochina, promoting the university's goal of becoming
> a multitechnical centre. Moreover, SUT has already
begun to form international faculty and student
> exchange agreements).

> SUT is unique in its freedom from Thai bureaucratic
> structure, reporting directly to the Ministry of
University Affairs and free to create its own
> policies in management, personnel, finance and
> education.

---

[1] Information regarding the mandate and mission of SUT,
together with background regarding the philosophy and values
endorsed by the University, was gathered from a discussion
between myself and the senior administrators of SUT, held on
Wednesday, July 28, 1993, chaired by Dr. Sam-arng Srinilta and
attended by Dr. Wichit Srisa-arn, President and Founder of SUT.
Additional material was provided by the brochure celebrating the
third anniversary of SUT's foundation.

Fifty per cent of SUT's students is selected by the national college entrance examination, while
the other fifty per cent is selected by Suranaree's in-house method, including an interview. The University has opened its doors this year, welcoming 731 students, 73% form the North-East region, 40% from the target area, and 20% from Korat itself, thus fulfilling its target goals.

III Academic Structure of SUT

The university's administration is led by its President and four Vice Presidents, including the Vice President, Academic, who supervises five Institutes(Industrial Technology; Science; Agricultural Technology; Resource Technology; and Social Technology), led by Deans as Academic Administrators. SUT's support structure includes five Service Centres (Educational Services; Computer Centre; Library Resources; Science and Technology Resources; and Technical Services).

The University currently offers eight BSC programs, with 6-8 new BSC programs scheduled for the next academic year. Each subsequent year, 6-8 new programs will be introduced, up to 26 full programs. The University's Graduate School will evolve in the same manner, beginning in two years' time with MSc programs in Biotechnology and Sensing Technology.

At present, the University employs 300 personnel: 52 teaching faculty and 250 support staff. Given its projected growth, the need for new faculty and support staff will grow rapidly.

IV Crucial Issues

Apart from its unique administrative autonomy and its strategic location, factors impacting on SUT include
its commitment to a cooperative work-study program; its engagement in international exchange programs; and its sensitivity to the differing proficiency levels in urban and provincial students.

All of the University's curricula actively encourage the capacity for continued learning and proficiency in communication skills. These curricula begin with a foundation year for all programs, including the requirement of fifteen credits (5 one-term courses) in English Language Training), with opportunities for further elective courses in English for Specific Purposes in later terms.

SUT has commited itself to the development of management skills, computer literacy and English language proficiency insofar as these capabilities enhance professional and communicative skills. While Thai is the official language of the country, and future plans include the possible creation of programs for learning Japanese or Chinese, at the present time English is seen as a major component in the export of economic activities from Thailand and in economic expansion within Thailand itself. Under its mandate from the Ministry of University Affairs, SUT supports a policy of internationalization which covers faculty, staff, students and language.

Given the extent of its external opportunities, and its internal strengths of thoughtful planning, careful recruitment of personnel, and strongly committed staff and faculty, SUT is in an excellent position to meet its mandate.

V Needs Assessment for English Language Training

Based on observation of English Language Centres in Canada and Thailand (see Apendix A), and on consultations with representation from all administrative and academic members of the SUT community, (See Appendices B-E) the following recommendations are proposed.

Administrative Structure for English Programs

While the scope of this report originally focussed on the ESL Centre which will serve the needs of international students, the SUT\CUTC agreement includes the possible transfer of SUT students to Canada for their third and fourth years of study. In order to provide the most flexible arrangements for students and the best use of faculty and technological resources, this report naturally expanded to include the required English Language Training offered by the English School in years 1 and 2, and the elective courses offered in years 3 and 4. These English School courses are to be supported by a complementary Self Access Centre.

The ESL Centre on one hand, and the English School\Self Access Centre on the other, should be physically together. Shared resources and shared faculty, along with shared space, will encourage continuity of student learning and provide a range

of teaching and professional development opportunities for faculty. Furthermore, if such facilities are located near the library, students will be able to perceive a continuum of available learning resources. The coordination of English Language Training in such an administrative structure both serves present needs and provides a foundation for further growth, in keeping with the University's evolution. In the future, the ESL Centre may concentrate on providing language courses and intensive programs for international students, extension students and special contracts with government, industry and business, while the English School will continue to serve the needs of SUT undergraduate students.

In short, SUT has an opportunity to create a unique program of English Language Training, whose components are distinct in function but coordinated in administration and academic rationale. This formulation, with built-in capacity for growth, may serve as a model for the development of other language centres at SUT. It may also provide a pattern for such facilities as a Mathmatics Centre and a Computer Literacy Centre should the need for these facilities arise.

In terms of SUT's administrative system, the combined English programs should have one Director, reporting to the Dean of the Institute of Social Technology, who will provide access to the Vice President, Academic. Given the resource base of much second-language learning, the English Director may need direct access to the Director of Library Services. At present, the direction of the English programs may be the responsibility of one person, but future growth will probably require Deputy Directors responsible for different programs. It is important to keep in mind the possible need for liaison with the Director of Technical Services, who supervises the extension or continuing education services.

Goals

The purpose of the regular undergraduate English courses is to develop student proficiency in the four skills of reading, writing, listening and speaking. Students who begin their studies at various levels should be brought to a general minimum level of proficiency, though individual students may wish to progress further than others in gaining fluency, depending on their aims and ambitions. These students will study in Thai.

5.

The purpose of the International Program is to enable its students to express their ideas clearly in academic and professional writing and speaking; to read effectively, being able to summarize their academic texts; to understand lectures and discussions; to participate in tutorials and seminars; and to study their professional disciplines in English. For regular students after their first foundation year of study, the three remaining English courses will provide a place for different disciplines to meet and learn from each other. In the International Program, English as a subject of study and as a tool of learning will form a coomon bond among students in different disciplines.

The Regular Undergraduate Program

The curricular design of all SUT programs requires students to earn at least 15 credits in English, a relatively high proportion for engineering and science students. While this policy supporting acquisition of language skills is thus built in to curricula, students benefit greatly when professional faculty reinforce the importance of English in an active sense.

In the first two years, students are required to take 4 English courses, all of which stress the four major skills. A gradual but increasing component of these terms should be English for Specific Purposes (EAP), and English for Technical Purposes (ETP). In this way, students will prepare for the upper level English courses (they must take at least 1) which will stress ESP and ETP, and should be taught, if appropriate, in English.

All first year students should be given a proficiency test, which will be aimed at a precise definition of their strengths and weaknesses. Students who perform poorly in this test may consider taking the intensive program, if time and money allow. Clearly, the proficiency test must be carefully chosen and applied. (See Appendix F for an example). There are two possible ways that this test can be used. First, students who do well in the test may be _exempted_ from English I, allowing teachers of that level to focus more accurately on student improvement. Exempted students would still be required to complete 15 credits in English, but at the higher level. Since _all_ students will earn 15 credits, no "double standard" would exist; but the less proficient student would gain more appropriate help, while the stronger student could develop better skills. A second possibility is to _informally_ stream students into different levels of English 1, so that the course would range from low beginner to low intermediate, depending on student capabilities. In this case, student _should not be aware_ of the informal streaming process, since the labelling of student

ability can harm student self-confidence and academic progress. In either case, students should be brought into a more uniform and consistent level of langauge proficiency by English 4, at least, and preferably by English 3.

There are two ways to create curricula and course outcomes. Courses may be set up with a defined proficiency level which students must meet in order to pursue further English courses. Alternatively, course design may focus on defining the present level of student capabilities, and bringing them forward from that starting point, a mode that de-emphasizes failure. The second mode seems most appropriate for SUT students. The implication of this method is that faculty must be responsive to student need and flexible in teaching delivery, since student level will not be known until classes start. However, this allows for immediate improvement of student skills and creativity in delivery modes for teachers.

In the first two years, course content will consist of:
- some level of "remedial" work, to gain greater uniformity of student skills
- equal emphasis on the four proficiencies of reading, writing, speaking and listening
- a gradually increasing component of ESP and ETP as students advance in ability
- faculty encouragement of student use of the Self-Access Centre, especially to strengthen individual weak spots and to reinforce classroom learning

The implementation of this course pattern depends on English School faculty having some formal or informal liaison with the engineering and technological faculty to discuss shared concerns about student progress. English faculty may use paragraphs, chapters from texts, or journal articles to demonstrate actively the connection between professional education and acquiring the tools of knowledge through English studies. Again, professional faculty must actively motivate students to regard English language instruction as the basis for their all-round education.

The elective upper level courses (of which students must select one) will offer greater concentration on modes of communication for specific purposes, such as ESP and ETP for science and engineering. Once again, faculty liaison will greatly assist English teachers to provide appropriate specific content instruction. If possible, these upper level electives

should be taught in English, although this suggestion can be dropped if it discourages students from continuing their English Studies.

Upper level courses, as electives, are also seen as increasingly dependent on self-directed learning. Students will be given assignments and the tools to undertake them, but they will be largely responsible for completing the work, though faculty may guide them.

The Self Access Centre (Language Learning)

While students may not be <u>required</u> to use the Self Access Centre for individual and class-learning resources, such a centre is crucial to the success of both the English program and the International Student program. It is worthwhile for teachers to create assignments and projects that are more easily completed by using the Centre's facilities. If students see that completion of <u>course work</u> is facilitated by the Centre's multi-media resources, they will be more strongly motivated to use the Centre for <u>self-directed</u> learning.

The Self Access Centre will have a full range of learning tools (see Resources, below) and materials. In addition, faculty should rotate responsibilty for staffing the Centre at regular hours, so that students will have access to help in their individual studies.

Another way for teachers to encourage student use of the Centre is to offer study skills sessions at the beginning of each term. These sessions, offered in Thai in a two-hour format, could focus on such basic needs as:
          How to Read Effectively
          How to Take Notes in Class
          How to Listen Effectively
          How to Organize Your Time.

These courses, perhaps offered in conjunction with Student Counselling, would not only help students get well started in their studies, but also demonstrate that the Self Access Centre exists to help them learn.

The Centre might also encourage students in each program to contribute to the Centre's resources in such matters as dictionaries of technical terms, explanations of particularly complex components of their courses, and learning strategies they may have found most effective.

The Centre should be attractive, and have an informal area, where students can read and study casually, as well as work stations where more organized projects can be completed. If the Centre is near the Library, students will see it as another learning resource for their benefit. The location of the SUT English Club in the Centre is yet another way to make it a focus for student learning.

Program Completion

The English School may decide to administer an exit-level test in the final year of study as measurement of student achievement; alternatively, successful fulfilment of course requirements may be sufficient proof of student capabilities.
But those students who excell in their studies, successfully completing English in years 1 and 2, and electing optional English courses in years 3 and 4, and making effective use of the available resources in the Self Access Centre, could be awarded a letter of proficiency from the English School. Such a qualification would aid students wishing to enter graduate school and make graduates beginning their careers more attractive to employers. Once students become aware that such certification is desirable, they may be more diligent in acquiring language proficiency.

Modes of Delivery

There are many, many ways to deliver language instruction. The Self Access Centre itself will provide technical aids to teachers, help to students and a focus for self-directed studies. However English School faculty may wish to consider some of the following options:

    -regular classroom courses may include brief lectures
        to convey factual information; small group
    activity; individual student presentations;
        role playing situations; seminars; and
        ongoing projects such as making a film.

-clinics may be offered at the Self Access Centre,
focussing on specific topics such as "Trouble
Spots in Grammar", "Handling Idioms", "Verb
Forms", Reading and Listening Clinics. English
faculty would offer such clinics at regular times
that students can attend, such as noon or 6 p.m.
These clinics would be offered in a rotating
pattern, giving students the chance to come back
for additional instruction.

-tutorials can be given on an individual basis,
depending on student interest and faculty
availability.

-class adjuncts involve an English instructor being
invited by a professional instructor to attend
a class, so that students can be given specific
help, in matters such as reading effectively or
taking notes, or general information on the Self
Access Centre and the assistance available there.
This once more relies on faculty cooperation.

The ESL PROGRAM FOR INTERNATIONAL STUDENTS

Students applying for admission to the International Program
may have clearer ambitions than those in the regular program,
but may also have limited language ability. The mandate of this
needs assessment involves the creation of an intensive program,
at appropriate levels, to prepare those students who would take
part in the international curriculum, parallel to SUT's regular
programs but taught in English. Four-week intensive courses are
aimed at study tours and improvement of practical skills such as
conversation and cultural studies. The most productive intensive
studies of English for college entrance are at least 6, 7, 9 or
12 weeks in duration, with the shorter programs offered to those
whose langauge skills are at a high intermediate level. Included
in this report are a general timetable for a 6- or 12- week
intensive program, from the University of British Columbia, and a
more detailed 7- or 9-week intensive course, depending on student
ability, from Ryerson Polytechnic University (see Appendix G).
These models have a built-in capacity for modification to suit a
wide variety of circumstances.

The recommendation of this report is that students write a
detailed diagnostic proficiency test. The results of this test
will determine the length and content of the level of intensive
course each student will undertake. The overriding consideration
here is that students coming into the International Program be
thoroughly prepared for the demands that their studies

in English will place on them. Moreover a generally flexible plan for the intensive program will lower student attrition rates and provide more opportunities for successful student advancement. Also, the prestige of the University depends not only on the qualifications and experience ofits faculty, but also on the excellence and capabilities of its graduates. If SUT accepts students into its International Program, the University must fulfill its implicit promise that the students will be prepared for international study and professional careers. In any case, the method of preparing students for the special program should contain provisions for ongoing evaluation of its own effectiveness, including modifications according to experience, perceived need and student welfare.

The first requirement of the ESL Program for International Students is a test which will establish student proficiency level, a test similar in structure to that used for the regular students but more rigorous in its demands and more exact in its diagnosis of skills levels. The test should include a _reading_ component, where students are asked to respond in _writing_ to questions based on the assigned reading; a _listening_ component, where students are asked to take notes on a lecture delivered to them; and a _speaking_ component, where students are interviewed by a pair of teachers, one conducting the interview while the other makes observations on student fluency. If required, further testing of writing skills may be introduced (a model of such a test is found in Appendix F).

The development of this placement test is best undertaken by the English faculty who will be involved in its administration. Most ESL instructors have experience in evolving such evaluative mechanisms; some indeed have pursued post-graduate studies in this specific field. The major concern is that this test accurately measure the skills of incoming students.

Care must be taken in creating and administering such a test; its _content_ should be chosen from subject material related to scientific fields, and students must be actively aware of its purpose and importance in determining the content and delivery mode of the intensive program aimed at preparing them for college-level studies in English.

When proficiency level(s) have been established, the content of the intensive program can be determined. The general pattern of reading\writing\listening\speaking, as in the University of British Columbia model, (Appendix G) will be adhered to, but content should be clearly focussed on immediate student need, in both academic skills and ESP\ETP. Depending on proficiency levels, students will attend the intensive course for a period ranging from 6 -12 weeks.

Once students have been accurately evaluated and placed, their intensive studies begin. The <u>objectives</u> of the program should be clearly stated, while <u>curriculum</u> must be tailor-made to meet such goals. <u>Course content</u> will be geared to prepare students for studies in English, bearing in mind that, depending on the curricular design of their studies, they may have two years (preparatory to pursing their studies in Canada) or four years of required\elective English during their undergraduate years.

This report recommends that the intensive course include an <u>immersion component</u>; that is, for a limited period of the program, only English be spoken in class and recreationally (such as films, newspapers and so on). While this may be a shock to students, it is a realistic preparation for their commencement of the International course of study. Here use of the Self Access Centre will be crucial to student success, since the intensive program is of relatively short duration. International students will have to use the Centre in order to prepare adequately for completion of both the intensive program and the special courses offered to them in the International program.

After successful completion of the intensive\immersion program, students will presumably be adequately equipped to undertake an academic program of study. In order to continue to provide them with language support, the English levels 1-4 taken by these students may differ radically from the content of English levels 1-4 in the regular program. Communication ability will gradually replace skills as the focus of study; a percentage of the student's grade should depend not only on attendance, but also on participation. Assignments in English should be related to students' technical studies, and instructors should devote some of the classroom time to the vocabulary and general concepts required for the students' professional studies. Content will include the continuum of reading\reflecting\ analyzing \writing, as well as some consideration of the writing style appropriate to the student's discipline. A variety of delivery modes will best facilitate student learning: class presentations, group activity, self-directed learning will supplement classroom work. Here it is crucial that English faculty and core course faculty have appropriate interaction, in order to provide the best learning environment for their students.

A further suggestion to aid students is that their lectures in all subjects be tape-recorded and made available in the Self Access Centre. While listening to a tape cannot replace class attendance, students having difficulty can practice listening and note-taking skills at their own pace.

At the end of the first two years, students may have the option of continuing their program in Canada. The International program may want a further proficiency test before recommending study abroad; at least some consideration should be given to assessing the individual student's chances of success in the exchange agreement.

For those students in the International Program who continue their studies at SUT, this report recommends that the pattern followed by regular program students be implemented. Again, the upper level elective English courses should reflect the specialized nature of their curriculum. Content of the English courses could include research skills, techniques of report writing in different contexts, conversation in business and industrial settings, and strategies for continued learning in the professional field and in English proficiency.

In both the early and later parts of the Program, proficiency levels should be established for each course in English levels 1-8. Unlike the promotion policy for the regular program, if a student in the International Program fails to meet the proficiency standard set for a course, he\she will be given an Incomplete grade and may not proceed to the next course until the requirements of the first one have been met, most effectively by use of the materials available in the Self Access Centre or through supervised study. Concern here is not so much for student discipline, but rather that students emerging from the SUT International Program be recognized as more than competent in their professional and communication skills.

International students will also be expected to make full use of the Self Access Centre, to supplement their classroom learning and to develop self-motivated learning abilities. The course requirements of the English levels 1-8 for International students will be most effective if they emphasize the benefits of self-directed learning; such education is at first teacher-dependent, but through attendance at the Self Access Centre, students will gradually learn to take responsibility for their own advancement. Such an approach to student progress will provide a good preparation for those students able to study abroad, and will encourage self-sufficiency in all.

In the long term, the ESL Centre for International Students and the English School have extremely attractive options for development of further programs. They may expand to provide college preparation for students planning to attend institutions other than SUT; to provide specialized programs of study to serve the needs of Business, Industry and Government; to create programs of study through continuing education to meet the ESL needs of the local community; to provide qualified assistance in conducting field studies with researchers from other countries;

13.

and even to extend their range to offer some ESL teacher
training, perhaps in conjunction with Nakhon Ratchasima Teachers'
College. Another interesting possibility is the creation of a
Translation Centre, both to train translators for appropriate
careers and to provide translation services to the local,
national and even international market. Provided that careful
thought is given to its establishment, the ESL Programs are
poised to provide hitherto unavailable learning opportunities for
the North East provinces of Thailand, and for the entire region
of South East Asia, in a naturally evolving and consistent way.

Resource Needs

This inventory of resource needs is based on the current
enrollment of 731 students in 8 BSC programs, plus the planned
expansion of programs up to 26 in the next few years. It also
serves the students (40-80 in the first year) registered in the
International Program, scheduled to begin in April 1994. To
restate the starting point of this report, one well-equipped and
well-staffed learning centre best serves the students and
conserves space and budget resources, rather than having a Self
Access Centre for students in the regular program, and another
learning centre for the International students. The creation of
two different centres would undermine the effectiveness of both.

1. Library. The most urgent need for ESL support materials is
the development its own library holdings. Current library
resources for ESL study, both books and equipment, are
negligible. If the Self-Access Centre is located near the
library, as recommended, the Centre should have its collection
within its own space, with the option of referring students to
additional resources in the library. As proposed earlier in this
report, the Centre should have its own librarian, with special
training in ESL materials. This librarian could serve as a
contact person between the library proper and the satellite
special library collection in the Self Access Centre.

2. The Self Access Centre should provide standard ESL grammar and
workbooks, clearly designated as beginner, intermediate or
advanced level of proficiency. Self-directed learning books,
similarly designated, and appropriate light fiction should also
be available. Magazines, newspapers and other recreational
reading would encourage students to practice their reading skills
in a casual setting. If the English faculty agrees that the
project is worthwhile, a Foundation Workbook could be created
over the first few years of each course; that is, for every
course taught to students in either the regular or International

Program, a series of exercises, extended explanations of the unit being dealt with in class, and self-study assignments would be placed in a file in the Centre. Thus students who were having difficulty with the English course could take independent action to catch up, while more proficient students could do further work to consolidate their knowledge. The essential aspect of this Foundation Workbook and accompanying files is to directly and exactly respond to class activities. Once students begin to use materials for individual learning, the likelihood is that they will seek out more such assistance during their undergraduate years.

3. **Hardware** The immediate needs of both the English School and the International Program can be met by a minimum of 30 language aids, such as tape player\recorders and headphones. As student enrollment and demand increase, the number of tape decks could double. In addition, 30 computer stations will be needed, again with a projected increase to 60 in middle term planning. Further expansion of both computer station and tape deck units will depend on the level of use required and the number of students to be served. While such figures are now unavailable, these future needs should be kept in mind in terms of budget and space available.

The educational use of video has greatly increased in recent years, both in showing learning-assistance films and in providing interesting assignments for students in making their own brief films. Such projects might include filming student presentations in the classroom, asking students to film interviews they may do as part of an assignment, or the filming of role-playing situations for later analysis. Thus this report recommends the acquisition of four video cameras, ten VCRs, ten monitors and two large screen display units, and ten headphones compatible with the VCRs. Given the mobility restrictions in that all classrooms are in one building, distant from the English School, the Self Access Centre and the International ESL School, two classrooms should each be equipped permanently with a VCR and a large screen monitor.

Classroom use of overhead projectors and transparencies has proved helpful in the classroom for years, and each English classroom should have one. Such equipment is extremely useful in demonstrating different versions of the same concept, and in teaching the kind of editing skills all students need to develop.

4. <u>Software</u> The question of estimating software needs is difficult, since such a very wide range of audio, visual and computer-assisted learning tools is available. Even ESL teachers who remain abreast of pedagogical innovations in their field have

a difficult time keeping up with the wealth of software produced

for language learning by publishers world-wide. Again, the most efficient way to acquire the best tapes, educational games, classroom aids, self-directed learning guides, worksheets and videos is to employ a librarian whose speciality is ESL resources.

Finally, three slide projectors could well be used by students as well as teachers in making classroom presentations and in demonstrating the results of special projects. Again, projection screens for the slides will be required.

Given the rapid development of educational hardware and the media-based mandate of SUT, appropriate budget allocations should be made for future years, to maintain the high-technological character of the University and its ongoing commitment to promoting communication capabilities of students and providing the very best professional and language education to international students.

5. Faculty The faculty of the English School at SUT are required to have at least a Master of Arts degree, and preferably a doctorate, in the fields of linguistics, English, or ESL. Experience in teaching at the university level is also desirable.

Faculty workload consists of ten classroom hours of teaching, regular student advising hours, and service to the university through curriculum, program or course development, membership on institute and university committees, creation and application of proficiency testing mechanisms, and "action research" (practical problem solving in classroom situations). Since SUT operates on a trimester system, faculty normally teach for two terms and use the third for professional development as well as vacation time.

Faculty are also required to undertake professional development, in terms of membership in the relevant organizations (such as Thai TESOL) and participation in professional seminars and conferences for teacher education. Since SUT is newly opened, the possibility for sabbatical and unpaid leaves is a matter for long-term planning. However, SUT is generous in its provision of scholarships to those faculty who wish to continue their educational development as teachers.

Evaluation of faculty effectiveness is goals-oriented; that is, teachers are given goals to meet and demonstrate their competence by presenting of lesson plans, undertaking an educational or research project, textbook and curriculum development, and in the proficiency development of their students.

The basic premise of this report is the coordination of faculty and resources for both the regular and the International programs, which remain distinct in aims and content.

The current 5 members of faculty are teaching at a ratio of approximately 1:135 students. At least seven more faculty will be needed for the regular program as SUT enrollment rises. In addition, three faculty members will be required for the effective running of the International Program. Ideally, these new teachers should have some background of college preparation, intensive\immersion courses, ESP and ETP, and experience in teaching at the post-secondary level. In addition, expertise in test creation would be a great asset. These professors would be integrated with those in the English School, and all faculty would participate in delivery of the regular English courses, the courses taught to the International Students, in attendance at the Self Access Centre as advisors, and involvement in creating and presenting the intensive course for the International students.

6. Support Staff

Depending on the duties assigned, the various English Language programs would require a secretary\receptionist for typing, making appointments for students, and assisting the faculty in preparing teaching materials. An administrative assistant will probably also be necessary, to deal with student inquiries, to assist the Director with administrative duties and to coordinate use of materials and hardware in the Self Access Centre.

As emphasized above, two of the most important support staff should include a **technician** to maintain the equipment in the Self Access Centre, helping both faculty and students in maximizing its use. Again, a _librarian_ whose training specialized in ESL materials and services is crucial to the development of a truly effective Self Access Centre.

7. Financing

Since the regular undergraduate students attending SUT will share the resource learning facility with the students participating in the SUT\CUTC international program, funding should be proportionally shared by both organizations.

CONCLUSION

The inventory of resource needs for SUT's English programs concludes this Needs Assessment Report. The data upon which this report was designed is available in the following series of appendices, detailing the process by which the recommendations were formulated. The Appendix concerning the interviews with support staff is self-sufficient and does not appear in the text of this report; the discussions were undertaken because of the policy of the University regarding internationalization, and because of support staff recognition of the importance of improving language proficiency.

I would like to end by thanking all those who were so generous with their advice and assistance. I am proud to be the first SUT\CUTC visiting consultant, and to have taken part in the creation of the "ideal" English Language Training program.