

Submission to the review of Higher Education, July 2008.

By  
David Boyd

*1. The Education Committee of the University of Adelaide formed a working party to consider changes which might be made to the ordinary B.A and B.Sc. degrees. They asked for suggestions and this was mine.*

*My underlying approach was that it should not be so radically different from the current system as to be totally incompatible with what we do at present (see page 3)*

*It is essentially a three part six years sequence of education, two years undergraduate, two years honours and two years training in research (the original idea of a PH.D), and then get the most promising people into postdoctoral research or out into teaching and industry.*

REVIEW OF THE ORDINARY B.A. & B.Sc. DEGREES  
A submission by David Boyd  
April 1991

1 BASIC POINTS

1. It is important for the university that students completing the Ordinary B.A. and B.Sc. degrees feel that they see the world with greater insight and that they are able to tackle the problems they encounter with assurance. To do this they should have studied some basic problems of knowledge and had the opportunity for significant intellectual independence in the first two years of their studies.
2. The university years are crucial in the intellectual development of many of the most able people in the community.
3. Education involves personal relationship between the student and his or her teacher and between student and fellow student. Students must feel that they are part of the university community.
4. Students who make a bad start in their university studies may be disadvantaged for the rest of their lives.
5. The university should provide a liberating experience which transforms adolescents into balanced and well informed adults. Years spent at university should be some of the most stimulating years of a students life; this often is not so.

Students come to university expecting much and many of them quickly form the opinion that it is not very different from school.

6. Satisfied alumni are the best defence a university has against government interference in the future.

2. THE STUDENT

1. The student is the most important person in the university; the purpose of a university is to train and educate students; without students there would be no university.
2. What makes a student want to study? What does the student expect to get from the years at university? What will the student be able to do by going to university that he or she would not get elsewhere?
3. How does the student see the degree? How does the employer see the new degree?

### 3. AIMS OF A UNIVERSITY

The purpose of university education is to provide the community with capable citizens and the individual graduates with insight into themselves and the world in which they live.

The university should fire the student with enthusiasm for learning. With senior students the problem is often to stop them working to the detriment of their health but with other students this is not the problem.

Note: The university should also provide an intellectual discipline akin to that displayed by a good musician who has obtained freedom through the mastery of technique.

See also Reflections 1. in section 8.

### 4. BASIC COMPONENTS OF A DEGREE

A university degree should be concerned with knowledge and how to use it, not just with information.

An Arts degree is concerned with people and the important components are, communication, reason and observation which are formally covered by the departments of languages, philosophy and sciences;

A Science degree is concerned with order in the physical world and in this case the components are observation and measurement, model building, matching and testing, which are dealt with in the disciplines of physical and natural science, mathematics and philosophy.

In addition the university has a responsibility for the development of each student as an individual.

See also Reflections 2. in section 9.

### 5. THE NEW ORDINARY DEGREE

See also Reflection 3.

#### First Year

I suggest that the 1st year of the B.A. degree is divided into five parts as follows;

- i. languages &/or linguistics - for an understanding of communication
- ii. philosophy - for an understanding of the complex thought underlying social structures including logic law and economics.
- iii. humanities - classics, history, geography, art, music and architecture to understand the place of people in time and space in our society
- iv. a science from the B.Sc. degree
- v. personal development.

Teaching for this first year will be the responsibility of the faculty and not individual departments.

I expect a first year student to work no more than 40 hours per week; able students will of course work much longer but they should not be required to do so. As the academic year starts in March and finishes in November the student will work for about 1560 hours during the year - that is they will spend about 300 hours on each of the main subjects.

The topic contents of parts i. to iv will I think be understood in general terms if not in detail.

Part v., personal development would provide students with time to do whatever they want; they may attend additional classes in other faculties, read or conduct independent research, run one of the university societies, go out and work to earn money; they must however provide a monthly report on what they have done with the time and submit a final report at the end of the year.

Students might be expected to relate their experiences in personal development to the other things they have been learning in the first year. Some students would probably require a good deal of guidance in the use of the free study time.

Assessment for the first four subjects would be pass I, pass II or fail. A pass would depend principally on participation in the work of the class and the satisfactory completion of class exercises. Students who want to get credits and distinctions in the subjects would be required to take an additional examination. Students should be encouraged to assess themselves; this perhaps is one of the very important things that a student has to learn - "Know thyself".

The only subject for which distinctions or credits would be awarded would be in the fifth one of personal development.

The Ordinary B.Sc. would be treated in much the same way. The subjects offered for a first year B.Sc. would be as follows;

- i. mathematics
- ii. physical sciences
- iii. natural sciences including psychology,
- iv. an Arts subject
- v. personal development.

Remarks made about time allocated and assessment apply to science as they did to arts subjects.

Note. Communication is as important for science students as it is for arts students. Practical experience in communicating will be obtained from the verbal and written reports required in "personal development".

## Second Year

- i. There would be six options in second year

### Arts

general Arts  
 applied Arts (economics & law)  
 practical Arts (music and architecture)

and

### Science

sciences

general science - mathematics, physical and natural  
 applied biological science - medical & dental and  
 agricultural sciences.  
 applied physical science - engineering and geology.

The details of options for the applied arts and science to be determined by the faculties concerned. I suggest that for the second year in general arts that the subjects might be as follows;

- i. Business and industrial Arts.- management, planning and applied research.
- ii. Language
- iii. philosophy/economics
- iv. humanities
- v. personal development

students would take options i. and v. and two out of the remaining three options. Distinctions and credits would be available for option v. and for the other classes if the students takes an extra examination.. A good student should be able to complete the five subjects..

For the B.Sc. degree the choice would be

- i. Business and industrial science- management, accounting and applied research.
- ii. mathematics
- iii. physical sciences
- iv. natural sciences
- v. personal development.

## 6. THE MECHANICS OF TEACHING

The new degree will depend not only on what is taught but how it is taught and learned. The analogy with music is relevant; great music should also be well played.

The new degree would require a different approach to teaching especially with regard to the management of the "free study" period. Assuming a first year of 600 students in Arts and 500 students in Science there is a commitment already of about 50 arts academics and 45 science academics to teaching the first year students. Some of them could I am sure be effectively redeployed to cope with the changes required for such innovations as the "personal development" part of the year. Obviously a great deal of careful thinking is required to make this change work effectively.

## 7. RELATION TO THE HONOURS DEGREE

The honours degree would be of two-year duration following the ordinary degree; detail is beyond the scope of the review.

The general degree would provide a sound basis for acceptance into a wide range of honours courses. This would be to the benefit of both student and department.

See also Reflections 4. in section 11.

## 8. REFLECTIONS 1

### Opinions

"What I found university did for me was that it taught me to read in various languages and various sciences so that I could go into the books that treated of these things and try anything I wanted to make myself master of gradually as I found it suited me."

Thomas Carlyle

"Not to enlighten one who can be enlightened is to waste a man: to enlighten one who cannot be enlightened is to waste words: a wise man wastes neither man nor words."

Confucius

"Parents are often careful to see that their children learn a range of skills which are means to various ends, but neglect to help them decide what ends are worth pursuing"

Kant

All men by nature desire to know. An indication of this is the delight we take in our senses; for even apart from their usefulness they are loved for themselves.

Aristotle

## 9. REFLECTIONS 2

A basic of any course is to provide:

- |      |              |
|------|--------------|
| i.   | facts        |
| ii.  | techniques   |
| iii. | theory       |
| iv.  | case studies |

i. facts: to provide the level of information that any practitioner in the field would expect to take for granted; it is in essence providing a data bank without which a student will find it difficult to start to understand the subject and without which it is difficult to judge matters of importance.

ii. techniques: to provide a range of concepts and techniques by which the data is manipulated in order to create a fresh appreciation and understanding of the information and help in the assimilation of new data.

iii. theory: sound practice is based on a proper appreciation of theory.

iv. case studies: to provide students with some experience in the use of the techniques and data so that they may obtain insight into the way in which it is employed to solve problems; that is students should gain knowledge of the subject as well as information about the subject; in this way the student learns to understand what the problems are and how to ask the right questions;

v. Students should find out how to learn more about the discipline and how to share with others what they have discovered; they must know how to communicate, both how to listen and learn and how to expound, inform and make sure that science is used effectively.

## 10. REFLECTIONS 3

Before making any changes to the degree we should ask a number of questions.

- i. What is good about the present degree and what is wrong with it?
- ii. What should the degree provide that it is not providing at the moment?
- iii. What do students expect from a degree and what do the public (employers) expect from the degree?
- iv. Why do I propose the changes I have made?

My changes are influenced by a number of things; I want students to be able to make the important decision about what professional training they will do as late as possible because a lot of students make their decisions in great ignorance; I am biased because few students know about geophysics when they come to the university so that they often stumble across it by chance.

I am also concerned as a teacher that my students should have a wide background in maths and physics as well as geology and also are able to communicate, understand the broad political/economic background in which my subject is practiced.

Any change to the ordinary B.A. or B.Sc. degrees cannot be done satisfactorily if they are considered in isolation; what is required is to look at the ordinary degrees in the context of the whole degree structure of the university.

Many students starting on an ordinary degree as well as some of the students starting on more specialised courses know little about the university. On educational grounds there is much to be said for allowing them an opportunity to become more familiar with what the university has to offer. If students have a clearer idea of what the scope of university learning covers they are likely to be better motivated to gain more from the years spent at the university.

While the poor performance of a substantial proportion of students is not entirely due to the university itself we could and should do better by the students. With most faculties enrolling students with a matriculation score of more than fifty points above the minimum score for matriculation the large number of students who withdraw or fail in the first year should be treated as a major shortcoming of the university.

Part at least of the reason for the poor performance of students is due to the confusing composition of a degree course. The flexibility of choice of subjects which has the virtue of providing great freedom of choice confuses many students some of whom do not complete even one year and others end up with an unsatisfactory combination of subjects so that they get less from the university than is their due. This flexibility produces a complexity in the degree structure which contributes to the academic problems in the

advanced classes and provides an additional load to already overworked and over academic staff.

#### 11. REFLECTIONS 4.

In practice the degree structure should provides as much flexibility as possible and at the same time provide a sound foundation for the students to extend study. In the present structure there is flexibility but little unity and cohesion in the degree obtained. The structure of the degree should not make teaching more difficult than necessary and it should be as easy to assess as possible.

In order to do this consider the ordinary degree as the first, ( and in itself a complete), stage in seven years of university studies which provides a cultural education in Arts or Science and which will also prepare the students to contribute to the community.

stage 1 a limited choice ordinary B.A., B.Sc. which would form the basis of all other degrees.

stage 2 a two year honours degree.

stage 3 three years PhD which would provide a training in research; that is for research done under the direction of a supervisor.

This would provide a doctorate roughly comparable in achievement to the M.B.,B.S., of the medical faculty which is awarded at the end of seven years of study and practice.

Note: It may be that two years of the first stage is not long enough to provide the education required; the two year preparation could be used as the basis of various diplomas.

*2 I considered that the proposals for changes in university education circulated by the Department of Education in Canberra in 2002 was short on fresh ideas. The suggestion here is really taken from 12<sup>th</sup> century Bologna where the students were mature professional lawyers who employed the academics and fined professors if they were late for their lectures!*

Extract from my comments on Education at the Crossroads – Striving for Quality Chapter 6 August 2002

The first two sections, assessing the quality of teaching and learning and effective and efficient learning experiences and environments are obviously related. The account of checks and balances required to monitor the teaching and learning activities presents something akin to the Ptolemaic model for the solar system. It looks and is I think cumbersome, I suspect that it is likely to be costly in terms of money and effort, ineffective, and that it will have a slow response time. It is the outcome of the authoritarian approach to university management. As I think that a fresh start is required, I commend the Bologna model as a possible alternative.

I consider that the purpose of much of this part of chapter six, aiming for and monitoring the quality teaching and learning, could be achieved much more easily than is envisaged here by using a student centred system in which the university teachers facilitating learning rather than as in the past they have dictating it. With the development of lifetime learning the nature of the student body has changed. It now contains a number of older people with experience; if this group reaches a certain critical level within the learning group and includes a number of persons who can speak with authority as well as experience then learning and quality control may be radically changed.

The first step has been mentioned already – provide students with a job description which sets out both aims of study and the contract with the institution.

The second step builds on further education (lifetime learning). Are government departments, politicians, professions, business and industry really concerned about the quality of higher education? Do they subscribe to lifetime learning? Then let them spend time studying in the university classes as mature students and by their presence and the presence of women who have brought up families, enrich the learning experience of the undergraduates while at the same time they too acquire new skills and knowledge. If necessary legislate so that senior past graduates can spend 10% of their time, about 250 – 300 hours, attending university classes in subjects which extend their expertise as the guests of the university. Just think how the presence of senior students in tutorial discussion groups would enhance the environment for learning, provided they are prepared to contribute actively to the process of learning in the group.

Details need to be considered carefully but I believe that if 5% of class were from this older group it would completely change the approach to learning. The presence of the premier or leader of the opposition or the Director of CSIRO would ensure both the quality of the class and enhance the learning experience of all persons in the class. The presence of these senior people, and perhaps especially the politicians, because of their links would contribute to monitoring national standards of both teaching and academic achievement.

The participation by Australian professional men and women of distinction in the classes would also provide assurance to international students of the quality of education in Australia. The cost to the universities would not be high.

### 3. *Women in the University.*

*I subscribe to the opinion of Socrates “that the female sex are nothing inferior to ours except only in the strength of body, or perhaps steadiness of judgement”; considering the poor judgement shown by a lot of males*

*these days I think Socrates would have reservations about the second part of his opinion.*

Department of Geology and Geophysics,  
The University of Adelaide.  
5th May 1994.

The main point of this letter is try to put down some of the thoughts I have had about what might be done to help women and particularly professional women who want to have families. Please excuse me if what I write becomes a trifle incoherent at times but I have just sat down and written what I have been thinking and at times it is difficult to order the thoughts. Most of my thinking in the letter concerns academic staff not research students as they present a rather different problem. As most of us work for about ten hours per day and do something else for about eight the problem is really one of personal economies and expectations. I suggest that the solution may be through the development of communes.

I started thinking about the problem when I considered the very bright postgraduate women in geophysics who are required to choose between doing research and having children; it is difficult to do both at the same time within a university. That was how it started; my concern is really the more general problem that these clever women are exactly the people you would select to raise particularly able children and also make very special contributions to arts engineering or science or whatever their field of knowledge may be yet we as a society are organised to make it especially difficult to do this.

(This kind of problem is not exclusive to women; if you do something important well, (like having babies) there is pressure from society to keep on doing it to the exclusion of other activities. When I worked for a group of consultants I could do a lot of things that no one else in the company could; as a result I got the jobs in all sorts of nasty places and the less able geophysicists got the straight forward jobs in places like Las Palmas where they could take their wives and families. I got the trouble spots which I confess I thoroughly enjoyed and a wonderful education which was ideal preparation for becoming a teacher.)

To return to women. I think the biggest problem is the conservatism of society; people don't like change and they do not want to pay for any changes either. The solution may well cost money but we should at least look at alternatives and decide whether the money might be well spent in providing special support for women. It is in the interest of the society that all its citizens should be able to apply their skills effectively; it is particularly important for the society that the most able (both men and women) should have the chance to develop and apply their talents. How can a woman most effectively combine a professional career and bear and raise a family while she is still young (in her twenties rather than in her teens or thirties)

Before looking at the problem and solutions you should consider what the university might do to make it easier for women to work in the university and have children. University work is really terribly messy. It is much more stressful and unsatisfactory to work in a university compared with industry because you rarely get time to work long on one topic. Compared with industry it is often a rotten job. I suggest that for most academic staff the work would be a lot more satisfying and easier if employment during the university year were divided into two periods, six months concerned almost entirely with teaching and six months concerned almost entirely with research. I think that this might make it easier for women to organise child care over longer periods. (The present university system reminds me of the harassment of academic women with babies I saw in India.)

Teaching - This would require considerable reorganisation and probably rethinking of teaching programs but in the end it would make the work a great deal easier for the staff. Any staff member who is unable to complete teaching between 9 and 5.30 during these six teaching months (with allowances made for subjects which have classes in the evening and weekends) and has to prepare lectures or mark essays and exams at home is probably over-teaching or the department is under resourced and the university should do something about it rather than depend on the professional integrity of the academics to maintain teaching standards as it does now.

Research - It may be difficult to do some kinds of research in six month periods but I think that for a lot of the staff it would be easier if they could carry on their research for long periods without distractions. As most of us work for fifty or sixty hours a week anyway the teaching period of six months with forty hour weeks still leaves ten or twenty hours each week for research. I personally would have been able to do better research in the university if I had been able to get uninterrupted periods as you only get when you are on study leave overseas. I had forgotten how wonderful it is to get whole days and sometimes weeks on a project without distractions since I retired; it is the freedom to get on with research which you rarely get as an academic.

To return to the problem. What should we do for the women? What are the basic facts of what women really need? Here as a man I am at a disadvantage, I do not know the economics of the time or money in any detail involved in raising children and any solution is unreliable until there is some better basis for planning.

Planning must also take into account that to provide the stability for a family a woman should be able to settle down by her mid twenties so the university has to make decisions about her employment at a much earlier stage than normal; this has implications for all university appointments. This will mean running the university with more younger staff.

Recognising my ignorance about family economics I offer some possible solutions which are essentially concerned with the structure of the woman's personal life and entourage which determines the time and energy available to devote to higher learning.

It is necessary to have some idea of the magnitude of the problem to maintain a stable number of permanent staff. In an organisation of the size of Adelaide University (I assume that no permanent staff are lost to outside employment by moving to the civil service or industry and so increase the numbers of young people who must be recruited; if 50% of the staff transfer you must double the number) there needs to be and should be a steady annual recruitment of at least 11 persons (this number depends on the size of the university concerned) of the age 25 to 30 to the permanent staff- say six women and five men. (There is no reason why the University should not start recruiting at this rate from 1994.)

Assuming a child bearing and rearing period of twenty years (birth of the first child to the twelfth birthday of the youngest child) this means a continuing commitment to provide a structure which supports up to 120 women. Assuming 75% want to and can have children this means planning for about 90 and of these 50% may well wish to manage their own affairs so that we might be concerned with providing a structure for about 50 women and their partners and children.

What should we be trying to do? I think our main aim is to make sure that there is enough support to let each woman devote productive time to both work and children. Usually this has been attempted within a single pair partnership and puts the greatest stress on the woman. I think we should look to modifications of the system rather than attempt too radical a change. v.

My preferred solution is to build a more flexible and slightly larger social unit in which a number of adults cooperate to rear the children. This involves developing a more sociable living unit than is normally available in western society. The present suburban living in Australian cities seems to me to be socially destructive. If we could develop such a "family" unit it might change universities from training colleges to educational institutions. Student settlements were tremendously effective for education of the members and are fine except that they were single sex units.

For simplicity I talk of an academic group but in reality a mixed professional group would provide a richer environment. An academic ghetto would be a disaster.

The basic group would consist of three child producing couples who form the stable nucleus for a period of twenty to twenty five years to which is added three to six undergraduate/postgraduate students who join the unit for a period of three or four years and who would share some of the research and child nurturing activities, it is in effect a commune.

I would make this group part of a larger set of five such small groups, ie a total company of about sixty adults plus children. A group of this size would normally occupy thirty houses which at a rent of \$100 a week adds up to \$150,000 a year (1994 figures) contributed by the people involved; it is quite a project.

Like all organisations the success of such a venture depends on the willingness of people to make it work and academics as a group do not have a good reputation for cooperative activities. The chances of success will I think be enhanced by providing a purpose designed building and a well considered short set of rules.

There is I am sure a large literature on the design and functioning of communes and one of the first thing to do is to scan this to discover what has worked and where the problems have occurred. I suggest that in addition the department of Architecture should be asked to consider the design of a commune as a research project.

Simple rules for family living are set out in the marriage contract which focuses on the matters which give rise to the greatest problems, loving (sex), honouring (enhancing = education and emotional support) and cherishing (cooperating and protecting) as well as the division and control of possessions (money). This would seem not a bad place to start in considering the contracts under which people would be members of the commune.

I think though it is very important to go further than just rules; the organisation must have an esprit de corps and for that the members must feel that they have a worth while purpose. For me this would be the development of higher education appropriate to the 21st century.

Finally some minor points.

i. Women are considered to be disadvantaged by breaks in their career to have and raise children.

There is no doubt some truth in the statement but I do not remember anyone suggesting that men who had been absent from universities on war service for six or seven years were not perfectly able to return to academic work. If it is claimed that all men were equally affected it is not true and in fact it was said that the academics on the continent in countries under German occupation had been advantaged because during the war the classes were small and scientists at least had much more time for research. Nor do I remember hearing this said about men who change their field of research though I have seen it used to deny tenure to an academic who threatened others in the promotion stakes.

ii. Adelaide University considered discrimination against women in 1972 or 1973 and the departmental committee for geology was convinced that there was no discrimination in the university. My comment at the meeting that there were no women in senior academic positions was regarded as my lack of understanding of the way things worked in a university. The best teacher in the department was convinced that there was no discrimination; she was a senior tutor! I do not think attitudes in the university have changed a great deal.

One of my biggest criticisms of the university during the last three decades is that it reacts to outside pressures rather than deciding what is right

for us. What was it Machiavelli said; "The princes may not blame fortune for their losses. Their own indolence was to blame, because, having never imagined when times were quiet that they could change, when adversity came their first thoughts were of flight and not of resistance." How very apt a text for the princes of knowledge. There are obviously a lot of events outside the control of the university to which it has to respond but there are also a number of innovations which can be made under its own control and it should lead the country in reforms rather than following the lead of others.

I suggest that the university should

- i. consider changing the way in which it divides time in small units throughout the year to teaching and research;
- ii. have a policy of appointing at least six young women and six young men every year to the permanent staff (personally I think for the welfare of the country they should appoint two or three times this number and encourage academic staff to move to industry and the civil service after a period of five or six years in the university but that is another matter)
- iii. explore the development of professional communes as a means to developing continuing and higher education and the advancement of women.

4. *I was Chairman of the Advisory Centre for University Education (ACUE) around 1991/93. The Centre received a Federal Government Grant to study Quality of Teaching and Learning. The research followed the terms of reference provided but I decided to write down my own thoughts on the problem. This is a draft.*

5.

QUALITY OF TEACHING AND LEARNING      written 1993

1. These Recommendations are written to try to clarify where we should be going and what we have to do to get there.

The purpose of the recommendations is to define problems and where it is appropriate advance solutions. In many cases however the problems defined are complex and the recommendations include a guide to the type of further work which is required.

2. Quality is related to cost. It is often assumed that quality and cost are likely to vary in a direct relationship; this is not necessarily so; it is sometimes easier to get money than it is to sit down and think hard about a problem.

There is little doubt that quality can be expensive and an unwillingness to meet the cost may result in more waste than the savings justify.

Judgements about the effects and effectiveness must be made on the result. In education the results may be long in developing and ill-considered tinkering with the system of higher education with short term gains in view, runs the risk of long term damage to society. I have noted that the University has often seemed reluctant to research itself!

In many business activities the effect on quality of changes in the procedures is usually seen quickly. In education the responses usually take longer to develop. One of the major changes in industry in the last decade is the increasing speed with which new methods and new products can be brought to the market and we must be prepared to consider if this is possible in education too. Two thousand five hundred years ago it was considered that it took about thirty years for a man to reach maturity; little has changed since then. This matter is beyond the scope of this project but it is something which should be studied further.

3. In making the recommendations it is essential to keep in mind the fundamental aspect of university, freedom; freedom of responsible thought, freedom from prejudice and an open mind and freedom of action of all involved in the activities of the universities and through this the spirit of freedom must go out to the whole community.

"A! Freedom is a noble thing!  
Freedom maiss man to have liking;  
Freedom all solace to man giffis;  
He lives at ease who freely livis!  
A noble heart may haif nane ease,  
Na ellis nocht that may him please,  
Gif freedom failye; for free liking  
Is yearnit owre all other things."

Barbour 14th Century.

4. Society at all levels is built on trust. Trust is based on perceived actions and on effective communication between the parties involved.

Within a university the credibility of the senior academics, the vice and deputy-vice chancellors, the deans, the professors and the heads of departments depends on what they have done, what they do now and how they communicate with the other members of the academic community which includes undergraduate and postgraduate students. At this level academics are often poor communicators or poor listeners; trust between faculties, between academics and administration and between academics and students is poor and it is due to a combination of prejudice and ignorance. The most prejudiced comments about university come from academics within the university

Similarly trust between academics and government instrumentalities DEET, NBEET is poor. Both parties bear responsibility for this; the university should start the dialogue required to put this right.

There is concern expressed in the university about auditing of activities. Similar concerns have been expressed by groups within Australian industry and most of the groups that objected have gone bankrupt. The objection should not be to auditing but to what is done, how it is done and the use that will be made of the information. This is why trust is required. Criticism, even if justified, can be psychologically damaging and is not properly made can result in worsening the situation. In the 1992 "Quality of Teaching and Learning" we focussed on the strengths rather than the weaknesses of university teaching.

### Quality of Learning

1. Many of the factors; which influence the quality of student's learning are outside the control of the university but not outside its influence. The university should from time to time analyse these problems and inform the community.

The important factors in learning include the following:

i. The social economic and intellectual environment (aspirations and mores) in which the students grow up and are educated and by which they are motivated. Students like everybody else work best with a purpose; the belief (which is not necessarily justified) that there will be no jobs, and the absence of a clear government employment policy for young people at the end of their courses is a major hindrance to quality of learning; the ignorance or apparent indifference of those in authority regarding the problems or their unwillingness to tackle them is a further disincentive to students to strive for higher quality learning. The over emphasis on the importance of high marks especially when the job market is tight interferes with the spirit of cooperation and encourages cheating especially in the high profile disciplines.

The most important environment for all young people is the family; as the the top matriculation student in 1987 said "The first priority in study is a non-stressful family." Many students do not have this.

ii. An other major factor is the academic preparation and attitudes provided by the secondary school system. If there are flaws or shortcomings in the training and education provided at the earlier stage it may be difficult to overcome them.

In both these situations if fault is to be looked for it should be in the senior ranks of the Department of Education (Canberra) and not in the daily workers who have to grapple try to do quality work with inadequate resources and poor management.

Recommendation 1. The influence of intellectual environmental factors on tertiary education should be kept under constant review and a report circulated to all interested parties at least once in a year.

Recommendation 2. The conditions of appointment of staff in government departments concerned with university education should resemble as closely as possible those of academics. In particular the staff of these departments should be awarded study leave to allow them to keep in touch with developments in higher education. They should be encouraged to enrol for higher degrees (preferably not MBA.)

Recommendation 3. The performance of the senior staff in relevant government departments and associated bodies should be audited.

2. In the university there is widespread criticism of the preparation of students for work in the university. (see 1.i above) The problem needs to be analysed and proposals made for actions to be taken to separate facts from prejudice and to reduce or remove problems that exist.

Recommendation 4. A cross faculty working party which should also include some secondary school teachers, should be formed to deal with this problem. (One solution might be to require all senior teachers to take study leave at a university or similar approved institution involved in research and tutoring and for some university staff to work for period within the secondary schools.) Flinders University and The University of South Australia should do the same.

3. A good start is often essential to a major undertaking and university education is no exception. It is clear from comments by both students and staff in answers to a questionnaire prepared in the Quality of Teaching and Learning study, that although departments do provide information about the organisation and nature of the course that the communication of information in some classes and to some students is not effective.

Still more important many students start their career at the university without understanding the changes in attitude required by them in university study.

In the long run education is about people; teaching and learning is a dialogue. For a dialogue to be effective each party must know something about the other as persons. Staff should provide a short account of their careers and special interests so that students are able to relate more effectively to them; students should be encouraged to produce a short analysis of their interests and aspirations at the end of each year. That is they should practice 'self assessment'.

Recommendation 5.a Students must be adequately briefed on what the university has to offer them and the help that they can get if they need it. They must be told what is expected and what is required from them and they should also know what is expected and required from the academic staff. Plans for this should be prepared by a group chaired by the President of the Students' Association and be ready for the start of first semester 1993.

Recommendation 5.b The Head of each department should arrange for each staff member to write about what they have done in a manner suitable

for students to read; this information should be made readily available to the students.

4. A good briefing is only a start. Students arriving at the university are thrown into what is for many of them the chaos of a poorly structured community and this is true of both the professional faculties as well as the generalist faculties. Any industry which behaved like this would go bankrupt. Top priority should be given to establishing a staff/student network, possibly in the form of intimate cells of ten or a dozen members, to provide support for undergraduate students throughout the period they are students at the university.

Note: artificial social units are remarkably difficult to establish, see the development of new towns, and great skill will be need to develop effective cells.

Not all students may need or want to have this support and the freedom of the student to opt out must be respected.

Planning is essential for all projects. Students should receive much more help in the planning of their courses; students should be given much more assistance in finding out what they can do well.

Recommendation 6. A Deputy Vice-chancellor should be asked to develop a proposal to provide system of ongoing support for undergraduate students. A pilot scheme should be started in 1993. If a Deputy VC is too busy, this could be done by a recently retired Chairman of the Education Committee.)

5. It has so far been assumed that the university is concerned with formal learning which is done in a lecture theatre or tutorial room or laboratory in front of academic staff. It is probable that for many of the students that much if not most of the valuable things learned at university are learned in intercourse with fellow students and is non examinable. (Lectures etc. = training; informal education=education.)

If the intention is to support formal learning then as any teacher will tell you one of the best ways to learn a subject is to teach it and part of the support system proposed above should include teaching by students not for money but as part of their duty as a member of the university community. (It might do no harm for students to recognise the debt they have to the community and to their mentors and one way to repay this is to pass on what they have learned from others. To quote Heraclitus "Although wisdom (our intellectual culture) is shared, most men live as though their thinking were a private possession.")

In addition to supporting formal learning in this way the university should encourage student societies as a major centre for undergraduate learning as well as for undergraduate support as set out in the previous section.

Recommendation 7.a. The Advisory Centre for University Education should be asked to research the problems likely to be encountered in greater integration of students at all levels in university teaching and from this develop a scheme to start in 1994.

Recommendation 7 b. Involvement in societies should be considered as part of university learning.

6. Research is a form of learning; students would understand more quickly the purpose of their studies if they were involved in some of the research which is being undertaken in the universities by honours students research students and staff. Many people doing research in the university need help with routine tasks. By involving students as assistants the student would grasp more quickly the true university ethos in the excitement of discovery and develop more effectively a community of shared knowledge and experience.

Students involved in such work would be expected to keep a proper record of their involvement in these projects including some form of analysis and the nature of the research and its results and where it was appropriate a department should incorporate this into the assessment of the students work.

Recommendation 8. The president of the Postgraduates Students Association should be asked to form a small working party to explore ways in which the more senior undergraduate students in the first three years could be involved in honours, postgraduate and staff research projects in 1993.

7. Dialogue between staff and students is a part of effective learning. Students who submit written work or make contributions in tutorials need to have a prompt response from the lecturer on the strengths and weakness of the work. If the lecturer is not able to provide a response within about a week there is something wrong with the way in which the teaching plans are being managed and he or she is obviously overloaded and should report this to the head of the department who if no resources are available will report this to the Dean of the Faculty who will take this into account in Faculty submissions in the following year.

Recommendation 9. Lecturers should inform the head of department about any delays in marking and handing back student exercises as this indicates shortcomings in planning or in the availability of resources. The Head of Department should inform the Dean of these problems at least once a semester.

### Quality of Teaching

The University has a more direct control of the quality of the teaching than it has over the quality of learning. The university has a complex system for appointing, confirming and promoting academic staff so if there are problems with the quality of teaching it is principally a problem of management of people and resources.

Although the responsibility for the quality of teaching a course is generally regarded to lie with the individual lecturer who is given much freedom in the conduct of his duties this is not so. Many lectures and tutorials are part of a course planned by some other person and usually approved by a

department committee so that for both course content and presentation the real responsibility lies with the head of the department.

1. A major concern of the majority of the academic staff who were interviewed as part of the project was the lack of resources; they felt that they did not have enough time to provide the quality of teaching they considered right; they felt that there was not enough time available and to solve the problems required more staff.

Academics include many of the most intellectually able and dedicated people in the country. One of the main aims of the management and administration of the university should be to ensure that the academics spend as much of their time and effort as possible doing the things which they have been appointed to do because they are supremely good at it, namely their teaching and research. There is also a strong economic argument to make sure that some of the highest paid employees in the country do not spend their time doing work which could be as well or better done by lower-cost support staff.

Note; according to the Australian Bureau of Statistics the salary of a senior lecturer at the top of the scale is within the top 3% of salaried employees in Australia; if you include the consulting privilege which in Adelaide allows them to earn 25% of a professorial salary in addition, the income of a senior lecturer will be in the top 2% and readers and professors are even better paid. The university in the interests of good education should be prepared to do a great deal to support academics in their professional activities and it is important that the academic staff feel that this is so.

While the complaint that the resources are inadequate may often be true the problems may also be due to unsatisfactory management. Part of the whole problem may be that academic staff are expected to do too many things at the one time and as a result do none of them as well as they could.

The solution may lie in a clearer demarcation of the lecturer's duties and by reducing distractions might result in more rewarding and satisfying periods of both teaching and research. In some department and faculties in Adelaide teaching by individuals is as far as possible done in one semester and the other semester is available mainly for research and scholarly activities; this is in keeping with the generally accepted division of an academic's time between half time spent on teaching and half time spent on research.

Such an arrangement of six months devoted to teaching and six months devoted to research( which could be extended to twelve months of teaching and twelve months of research every year by alternating the teaching semesters) would allow the half year of 840 hours (35 hours per week for 24 weeks of the year) to be available for teaching. As in the department budget 650 hours of part time teaching is regarded as equivalent to the contribution of a full time staff member this leaves 190 hours for administration and other duties.

Full time teaching where teaching includes all course preparation, marking, conduct of examinations, supervision of honours students but not of post-graduate students, would be done during 28 hours per week for 24 weeks of the year with another 7 to 10 hours per week being allotted to administration and other duties within the department or university.

Recommendation 10. Deans should consult with the heads of departments to find out if the scheme of one semester devoted to teaching and one semester devoted to research produces any insurmountable problems in carrying out the work of the university. Departments which are unable to make arrangements may in fact be under-resourced at present.

2. Research is a major concern of the university and some academics may be more attracted to research than teaching. The university should consider the designation of a small number of current academic positions for limited term "research lecturers" or "research professors" in which the teaching commitment was very substantially reduced, to perhaps to eight weeks of the year; at the end of the tenure the position would revert to a normal teaching appointment.

Recommendation 11. The Chairman of the Education Committee should consider what problems might arise if a small number of academic positions were designated as limited term research positions in which the teaching commitment is limited to 8 weeks in the year. He should also consider the length for which such a position could be held by one person.

3. Criticism, feedback and review is an essential part of any system. Sometimes the process is completed in a matter of minutes; in others such as a university course it should be an ongoing process which may spread over years or even decades.

If we discount the self criticism which is part of the initial preparation of any lecture or course, criticism and feedback starts informally during the presentation with a good lecturer reviewing and modifying the performance, while he or she is standing in the lecture theatre and the lecture is in progress; in many departments students are invited to provide an assessment of the lecturer's performance at the end of the course and this together with the class response provides an indication of the immediate impact of the lecturer on the students.

However the fundamental quality of a university course lies in its content not in the way that it is presented and criticism and review is required at a deeper level as well. As far as I know there is no accepted regular and systematic criticism and review of all teaching in the university; various aspects are covered in different faculties in different ways but it is not done to a plan through the University.

Different approaches are required for effective criticism at different stages and it needs to be done not by one but by several groups of critics and I will propose that there should be two or perhaps three groups involved,

- i. the raw and for the purposes of the study naive undergraduates group "A" who are the principal clients of most courses,
- ii. a second more sophisticated group "B" with a broader professional experience in related fields e.g. people on study leave from industry and government,

and with a greater appreciation of the techniques required in teaching e.g. tutors from other departments in the University who are learning how to teach and also widening their own intellectual horizons, and

iii. a third group "C" which would include professionals who may be more familiar with the practice than the theory of the course subject.

Stage 1. The information required at the first lecture is 'can the students see, can they hear and can most of them follow the general argument of the speaker'; if they cannot then both lecturer and students are wasting their time. There should be a standard procedure by which students let it be known if the basic requirements of good teaching are not being met.

Stage 2. A lecture may be well presented, entertaining but also superficial, irrelevant or trivial; it may be that the lecture topic is important complex and difficult to grasp; not many students in their first years at university can make the distinctions required. It is desirable for this reason that some of the "resident critics" (from groups B or C) of the course have themselves some experience in a related field and understand the problems of communicating difficult topics.

Stage 3. There are few lecture courses in the university which do not contain material that resonates through the professional life of our graduates; feedback after a decade may be flattering or damning but it is not likely to be very helpful for the need for comment is more immediate. The alternative is to have within a class a few students (group C) who come to the class for refreshment and enlightenment and have practical experience of the topic of the lectures.

Recommendation 12. The problem with a class especially a large class is that it is chaotic and without structure.

i. There should be a simple procedure followed when a lecturer first teaches a class by which students who have problems in matters of basic communication can let this be known promptly to the lecturer- by the end of the lecture.

ii. In each large class there should be a small clearly identified quality group which would include both mature and naive students who would be able to transmit conceptual and content problems rapidly to the lecturers.

iii. In the closing analysis of each class the group "A" students are asked to answer specific questions; the group "B" & "C" students should be asked more open ended questions about the content of the course.

iv. A proposal should be drawn up by a working party consisting of tutors and members of the Alumnae Association chaired by Chairman of the Staff Association.

Note: We have suggested elsewhere that all junior newly appointed staff should receive training in teaching at tertiary level. As part of this we recommend that all tutors should attend one or more university courses outside their department as part of the training in teaching.

We suggest too that academic staff including retired staff who retain a link with the University, should be encouraged to broaden their knowledge by taking a number of courses in return for which they would provide a critique of the course. (The Professor of Geophysics might attend lectures in Politics or Linguistics and the Professor of Physics might attend lectures in Law or Dentistry.)

4. We note that research matters are coordinated by a Research Committee and consider that a similar committee should deal with all matters concerning the practice of teaching in the university.

Recommendation 13. That there should be a minor as well as a major Education Committee to coordinate all matters of practice of education in the University. This committee should be chaired by the Convenor of the Education Committee.

5. University teaching has a long history. In spite of the drastic changes in the number of and the background of students coming to the university during the last half century the approach to teaching has not changed much. The whole approach to university teaching in Australia needs to be rethought. The consideration of this problem will take several years to resolve and should be the subject of a major research project.

Recommendation 13. A proposal for radical changes in teaching in Australian Universities should be developed by the Convenor of the Advisory Centre for University Education Committee in association with other members of this committee and presented to the proposed Minor Education Committee

6. Students should not rely on examiners to tell them if they are performing satisfactorily in their studies. All first year students should be encouraged to develop self assessment which I think was the instruction over the gates at Delphi "Know thyself." I am sure Socrates would approve!