"Si monumentum requiris circumspices"

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QUALITY ASSURANCE IN UNIVERSITY MANAGEMENT & PRACTICE

very seriously in the UK, and that it is bringing about a change of culture. There is growing acceptance of the Government's right to demand accountability for the expenditure of public funds, and that teaching and learning can be done better and deserve greater prominence. Audit has forced a degree of introspection, exposing things which are being done well and things which are capable of improvement. This is leading to significant improvements throughout the system. To paraphrase one auditor: "There is no other way in which the change of culture that is being experienced could have been brought about so quickly". This change occurred without funding implications. Self-reflection and peer review have been sufficient, aided, no doubt, by the fact that public exposure followed.

It would not be sensible for us to ignore the extent and impact of the changes that are occurring in the university sector of the UK. We should, therefore, begin to critically review the quality assurance processes of the University of Newcastle, to identify areas where changes need to be made to improve the quality of teaching and learning, research and community service. The following discussion draws together insights about the types of questions that may be addressed.

QUESTIONS FOR INSTITUTIONAL AUDIT

The following are examples of the questions the University should be able to answer if it is to satisfy auditors that it has adequate processes in place to guarantee that the quality of its teaching and learning is consistent with its claims. The list is illustrative.

1. Quality assurance and review arrangements in the University.

Does the University have a clear statement of Mission, Goals, Objectives and Strategies? How does the University ensure implementation of the intent of this statement; ensure adequate resources for its programs; scrutinise the quality of its teaching and learning activities; ensure that staff and students are fully aware of these processes?


How does the University satisfy itself of the need for courses; ensure that curricula are suitable to the needs of graduates and their employers; ensure rigour and thoroughness in course development and review; ensure consistency of course proposals and offerings with its mission; satisfy itself of the academic standard of its courses; assess the resource implications of new course proposals and satisfy itself that they may be met; satisfy itself of the currency and relevance of its existing courses; satisfy itself about the quality of its departments?


How does the University ensure provision of up-to-date curricula and syllabi with clear and full details about the aims, methods, assessment, resource needs and employment outcomes of each course; ensure curricula are organised and delivered in ways which ensure high quality learning and which are cost-effective; satisfy itself that students in proclaimed vocational and professional courses acquire all the necessary skills; satisfy itself about the quality of its courses in operation; ensure that the teaching quality and number of staff is suitable; ensure adequate personal, social and learning support for students; ensure adequate support for mature, overseas, disabled and other non-traditional students; ensure adequacy of provision of library, computing and other relevant learning support; ensure a suitable standard for its classroom spaces; satisfy itself that students are receiving the standard of teaching claimed by the University?


How does the University ensure assessment is appropriate to course aims and methods; ensure that students are fully aware of the assessment processes to which they will be subjected; assure itself that the standard of assessment instruments is consistent with its avowed claims to quality; ensure the outcomes of assessment are fair and reasonable; monitor and assist students-at-risk; ensure that the standard of its awards are comparable with appropriate professional, national or international standards; ensure that award designations are appropriate and consistent with public understanding or its own proclaimed criteria?

5. Mechanisms for quality assurance in staff development, appraisal and incentives.

How does the University recruit, induct and support new staff; monitor and assess the developmental needs of its staff; ensure...
appropriaute developmental activities for its staff; ensure the appropriateness of its promotions criteria; ensure compliance with its promotions criteria?


How does the University ensure that it has adequate knowledge of student perceptions about their learning experience; ensure that it has adequate knowledge of graduate and employer perceptions of the suitability of courses to jobs; ensure appropriate responses to feedback?

7. The accuracy of promotional material.

How does the University prepare its promotional materials? Does the promotional material convey a clear and accurate picture of the University and its offerings?

SAFETY ON CAMPUS

A series of recommendations are to be submitted to the Vice-Chancellor to improve safety and security on campus. The Chair of a committee set up to report on campus safety, Professor Ken Dutton, said safety and security had always been a priority of the University.

"The University is now a much larger place than in previous years and while we are trying to maintain our bushland setting we must be aware of our responsibilities," said Professor Dutton.

The Vice-Chancellor, Professor Raoul Mortley, requested that the Campus Safety Committee investigate short-term and long-term measures to help ensure the safety on campus of students, staff and visitors. He has made available $30,000 to implement approved safety measures.

Professor Dutton said submissions had been received from student and staff organisations, residential colleges, university sections and individuals.

"The security and safety issues raised in the submissions fell into the three categories and the Safety Committee will send its recommendations to Professor Mortley."

Works most frequently requested include:

Category 1: increased lighting to car parks and major paths; lighted paths between residences and between residences and the university major campus area; 'safe' landscaping.

Category 2: education in personal responsibility for safety.

Category 3: accessible telephones to contact patrol services; increased patrol services on foot/bicycle; increase in the number of patrol staff; co-ordinated transport at night from the university to residences and sport centre; installation of additional public telephones; personal alarms; restricted access to campus by unauthorised persons.

SUBJECT: DISADVANTAGED GROUPS BENEFIT

Substantial progress has been made in ensuring that all Australians have the opportunity to undertake higher education study, according to a report issued by the Federal Minister for Employment, Education and Training, Kim Beazley.

"It has been increasingly accepted that equity is not a peripheral concern but an integral part of planning," Mr Beazley said.

Mr Beazley was issuing Equity in Higher Education: A Summary Report 1992-94 which confirms the Federal Government's commitment to equity in higher education as a social justice and an economic imperative.

"The Summary Report is testimony to the collaboration between institutions and the Commonwealth. This joint approach is essential if we are to make real progress towards the goal of making the higher education system equally accessible for all Australians," he said.

The Summary Report includes:

• An overview of the national plan for equity in higher education;
• Objectives and specific targets for six identified disadvantaged groups:
  • people from socio-economically disadvantaged backgrounds
  • Aboriginal and Torres Strait Islander people
  • Women in non-traditional areas of study and postgraduate study, particularly research
  • people from non-English-speaking backgrounds
  • people with disabilities
  • people from rural and isolated areas
  • Strategies for achieving the objectives and targets

• Summarised reports from higher education institutions on the outcomes of the access and equity strategies to date.

"The task is to assess and measure the outcomes so we can either confirm the results we hoped for or identify areas where strategies need to be modified or added to," Mr Beazley said.

"As well as continuing to improve access to higher education, the Federal Government is committed to assessing the success of the participation of disadvantaged students.

"There is little value in encouraging disadvantaged students into higher education if they are not adequately prepared and supported. We must aim at achieving successful outcomes in both graduation rates and satisfying employment," he said.

Works completed or in progress are:

Category 1: lighted pathway corridors; improved maintenance of existing lighting; all new lighting will be overhead; mound height reduced and pushed back to enable construction of pathways against kerbs.

Category 2: safety brochure 'Uni Watch' distributed.

Category 3: taxi ranks on campus; additional public telephones; installation of six strategically placed emergency telephones.

Professor Dutton said there would be visible signs of improved safety and security measures during Semester 2 once the recommendations have been fully considered by the Vice-Chancellor.
GRADUATE SURVEY: NEWCASTLE FIGURES

The recently released 1992 survey of graduate destinations shows that 47.2% of those University of Newcastle graduates who were surveyed had found full-time employment. The national survey was undertaken by the Graduate Careers Council of Australia and gives figures for 1992 first degree graduates as at April 30 last year. A total of 1178 graduates from this University were surveyed and 556 (47.2%) had found full-time employment. The number seeking full-time employment was 262 (22.8%).

The survey also showed:
* 229 graduates (19.4%) had gone on to further full-time study;
* 59 graduates (5%) were interested in part-time employment only;
* 56 graduates (4.8%) had travelled overseas for work, study or other commitments;
* 16 graduates (1.4%) were unavailable for employment.

The Head of the University's Careers and Student Employment Office, Ms Nina Athanasopoulos, said more than 52,000 graduates were surveyed nation-wide and that Newcastle University destination figures compared favourably with the national figures.

"The national figures showed that 44.7% of all first degree graduates were in full-time employment while 18.6% were seeking full-time jobs," Ms Athanasopoulos said. "Although graduates continue to have fairly strong employment prospects, the survey did show that more graduates were seeking full-time employment than for any year since at least 1974."

Almost a quarter (24.7%) of the graduates were continuing with further full-time study. Ms Athanasopoulos said 42 discipline groups were surveyed. However, comparison between disciplines was often inappropriate as each discipline might have its own pattern of employment. "At an example, 98 Education graduates (58%) from Newcastle University went into full-time employment," she commented.

"As Education is a field of employment that lends itself to part-time and casual employment more readily than others, 34 graduates (20.1%) were working on a part-time basis while searching for full-time employment. Another 10 graduates (5.9%) were working part-time and not seeking full-time employment."

"On the other hand, in a discipline like Chemistry where employment prospects may be enhanced by further study, eight graduates (36.4%) from Newcastle University went into full-time employment while 12 graduates (54.4%) went on to further full-time study."

Ms Athanasopoulos said Newcastle graduates were realistic about their employment opportunities. Many were very aware of the tight economic conditions and the resultant effect on the employment market. The Careers and Student Employment Office encourages students to gain some work experience during their course. "Work experience, on a paid or unpaid basis, together with active involvement in student clubs and associations, sporting activities or community activities can enhance an individual student's employment prospects," Ms Athanasopoulos said.

"We also offer workshops on resume and letter writing and on interview skills to help prepare final year students for the recruitment process. Staff and students interested in the destination figures can contact the Careers and Student Employment Office for additional information.

In the last "Catalysis" we printed the second of five questions posed by retired Deputy Vice-Chancellor (Planning), Dr Doug Huxley, during his occasional address at the 1993 Graduation Ceremony. Catalysis continues with Dr Huxley's third and fourth questions to graduands.

Can we look ahead to the day when our higher education curriculum are properly aligned to ensuring a match between educational outcome and societal need?

* On that day, primary, secondary and tertiary education will be a continuum and each sector will teach the appropriate sections of a truly integrated and coordinated curriculum.

* Should we assume that completion of secondary school marks the end of the formal general education needed by effective members of our society? Or should we insist on continuing a person's general education into at least the first years of higher education.

* Where better to teach, for example, The Australian Constitution; Australian Politics; The Economics and Ecology of Sustainability; Legal Rights and Responsibilities; and similar knowledge essential for intelligent and responsible exercise of our democratic rights? I think the Australians have the right approach with bachelor programs of four years, the first two years of which are devoted to the general education of their students and the next two devoted to intensive development of special interests and professional practice.

* But getting the structure and curriculum right is only the first problem. Is it not also time that we decided that it is appropriate to teach not only knowledge, but also its application?

* Would it not be more appropriate were we to teach the techniques of synthesis instead of assuming that our graduates will understand intuitively how to bring appropriate, but discrete, pieces of knowledge to bear on the solution of particular problems.

Can we look forward to the day when the question of what constitutes quality in higher education is resolved to the satisfaction of the universities, the Australian government and the community?

Many are asserting that teaching should be returned to the position of pre-emminence that it had in earlier centuries and the first half of this century.

Today, the reputation of a university relies first on its research record. There are those who would argue that it should rely first on the quality of its teaching.

There are some who suggest that research should be undertaken with two purposes only:

* the generation of the knowledge needed for effective teaching and

* the training of postgraduates in research techniques and values.

There is one Australian Vice-Chancellor who goes further and would argue that quality should be assessed in accordance with what he calls the "Five-Fold Path to Honour" comprising teaching and learning, research, scholarship, collegial administration and community service.

The Commonwealth government has allocated $70m to what it terms, "the improvement of quality" and is currently establishing its quality control mechanisms.

Clearly, there is emerging a debate that will influence the direction and focus of academic work into the next millennium.

The views of the community and, particularly those of each university's graduates, will be important.
Canberra-bound for a six-month secondment to the Australian National University, Professor Lois Bryson from the Faculty of Social Science, will take part in an intensive "think tank" project entitled "Reshaping Australian Institutions: Towards and Beyond 2001."

Lois will be involved in one of 17 sections of the project which takes in areas such as the economy, Aboriginal Australians, gender, population, public governance, intergovernmental relations, environment, business, the labour market, law and order, the city, higher education, citizen beliefs, and attitudes about Australian institutions.

Lois will research the topic, The Welfare State, and will consider ways to reshape the Australian welfare state to reflect social, demographic and labour market changes; identify the historic, social and political underpinnings which give the Australian welfare state its specific character and renew debate on the nature and purpose of Australian social policy.

The project is the initiative of the Research School of Social Sciences at the ANU, to embark on a fundamental rethinking of Australia’s key institutions for the centenary of federation and to bring some of the country’s best minds to the University for short visiting appointments.

Lois is well qualified to take part in the project. Her book, Welfare and the State: Who Benefits, was published last September and focuses on the widest range of social policies, affecting the wealthy as well as the poor, gender through examining women’s welfare state and men’s welfare state and the interests of non-dominant races both within nations and internationally.

Lois is currently researching the relationship between paid and unpaid work and the issues of citizenship and equality between men and women.

She said that the latest figures for Australia indicate that 52 percent of women are in paid employment and of that percentage, 43 percent are employed part-time. These figures compare with 74 percent of men in employment of whom 11 percent are employed part-time.

"The reason many women work part-time has to do with family considerations while men work part-time for study reasons," Lois said.

"However," she says, "when you look at the relationship of the amount of unpaid work that women do to the amount of paid work, they do far more unpaid work and less paid work. That has got its own problems in terms of equality, not only because of the fact that while they are doing unpaid work, they are not getting the economic rewards, but also because the social rewards and the prestige rewards are all associated with paid work in this society.

"I am involved with conducting an analysis of that relationship. What you find in every country of the world is that women do much more of the unpaid work of the society than men. Men do more of the paid work.

"Women are largely responsible for the caring in society. We will research how men and women spend their time and how much of that time is spent in paid and unpaid work. We will also be looking at leisure and personal maintenance, the whole way men and women spend their 24 hours, what the differences are and where such priorities are," she said.

Lois said the study will use national surveys from 17 countries, including Britain, the United States, Japan, Bulgaria, Hungary, Finland, Austria, Norway and of course, Australia.

"We will be looking at these countries and trying to see what sort of social policies lead to a greater degree of equality between men and women. We are not just looking at the outcomes, but the relationship to the various programs, such as equal opportunity and child care provision to see how they affect full-time and part-time work opportunities, income levels and career opportunities.

"We are particularly interested in social policies because family attitudes are notoriously difficult to assess and compare in different places, and they are notoriously difficult to change. Interestingly enough, social policies can lead to changes which might not yet be clearly reflected in social attitudes," Lois said.

"My particular interest is the nature of the Australian welfare state and focuses on an understanding of the forces at work there and how they are affecting the nature of citizenship today. This can then be used to inform planning for the future to enhance levels of citizenship and equality.

"I also believe there are many other elements that we need to look at in relation to, for example, the way loans are structured, maternity leave provisions, and child care provisions," she said.

Lois was recently appointed to the Research Training and Careers Committee of the Australian Research Council. The Committee is responsible for postgraduate awards and fellowships and policies relating to research careers. Its focus is on the support of individuals involved in research activities, usually at the postgraduate and postdoctoral level.

Professor Lois Bryson - "Women do more unpaid work than men".
**MATHEMATICIANS HELP WITH HOUSE PLAN**

Dr Sharon Boswell, who graduated from this University with a PhD in Mathematics, says she is interested in applying her PhD research to "real world problems." Her thesis project, in the area of Facilities Layout Planning, aimed to determine the best planar arrangement of objects, such as rooms in a building, or machines in a factory.

Sharon explains that the adjacency problem is concerned with the adjacency of the facilities in a layout, not their size or shape. "The adjacencies in a layout are represented by a maximal planar graph (MPG)," she says, adding that this is not a graph in the usual sense, but a form of network diagram.

"The MPG for a given layout is constructed by using a point to represent each facility and connecting two points by a line if the facilities they represent are next to each other in the layout," Sharon explained.

![A house plan with the MPG used to represent the adjacency between rooms.](image)

The exterior of the layout is also considered to be a facility, as in many applications it may be desirable to have particular facilities on the exterior of the layout, such as in the layout of a basic house plan. Here, the MPG is used to represent the adjacency between rooms.

"The MPG can be used to give a score for the layout. A number, called the benefit, is assigned to each possible pairing of facilities," Sharon said. "This number represents how desirable it is that two facilities be together in the layout." If the facilities should be next to one another, they receive a high benefit; if they should be apart, they receive a low benefit. "The number of possible layouts is extremely large. Even for the house plan, there are about 641,277,000 different MPG's, each representing a different layout," Sharon said.

The main use of these techniques is in industrial situations where the number of facilities is much larger than in a simple house plan, and the number of arrangements is huge.

During the course of her PhD, which was supervised by Associate Professor Warren Bosley, Sharon developed a new heuristic, called TESSA, which has sparked international interest among researchers and graduate students. In January this year, she took up the position of Lecturer in the School of Mathematics and Statistics, at Curtin University of Technology, Perth.

**IMMERSED IN LANGUAGE**

The University recently hosted the first biennial conference of the Australian Association of Language Immersion Teachers (AALIT). The convenor of the conference, Michael Berthold from the Department of Curriculum Studies, proposed the establishment of this association earlier this year to colleagues throughout the country working in immersion and bilingual language programs.

Immersion language teaching is an approach to language teaching which aims to produce students with a high level of competence in a second language. This method relies upon the teaching of other content areas within a school's curriculum through a second language, using the language as the medium of instruction rather than as the content of the lesson. For example, Maths, Science and/or History might be taught through French, German or Italian. Although not well known to the general community, there are bilingual and/or immersion programs operating in most Australian states and territories. A secondary partial immersion program has been operating in Queensland since 1985, where 60% of the daily program is taught through French. The success of this program has led to the establishment of two other French programs and others in German and Indonesian.

The conference participants represented primary, secondary and tertiary teachers from both the state and independent systems, administrators from the Departments of School Education, and students from the B.Ed. (Languages/Asian Studies) program. Six states and nine languages - English, French, German, Hebrew, Indonesian, Italian, Japanese, Mandarin Chinese and Spanish - were represented. Most of these educators have been working in immersion or bilingual programs in relative ignorance of what initiatives have been taken in other regions or states. It was an occasion for them to come together to share their experiences, and to learn from one another. The participants took the opportunity to develop a network through which knowledge, resources, and research will be developed and shared.

Papers delivered by practitioners covered such diverse topics as: Stress on Students; Immersion: The Ideal Solution to the Time-Dilemma; Teacher Training Through Partial Immersion; Linking Immersion and Outdoor Education; The Importance of the Practicum in Teacher Development; The Staircase Model: Language Awareness to Language Acquisition; The Relation Between Medium and Message in Language Learning Across the Age Spectrum.

For further information concerning AALIT, contact Michael Berthold (President) at the Department of Curriculum Studies: 21 6414.

**TURKEY - NEW MARKET FOR UNIVERSITY**

The head of one of Turkey's major research centres believes there is great opportunity for complementary studies between the University and his country. Mr Orner Kaymakcalan, who is President of the Marmara Research Centre, said he did not see Australia and Turkey competing, in academic terms but providing opportunities that will benefit both countries. Mr Kaymakcalan spent five days earlier this month visiting facilities on the campus, inspecting a number of major industry plants in the Hunter Region and also visiting the CSIRO in Sydney.

His visit was the result of two recent trips to Turkey by the University's Dean of Engineering, Professor Alan Roberts, who investigated possible industry and higher education links. Mr Kaymakcalan said there was a mutual interest in scientific and education areas and that he could see the University providing opportunities for postgraduate students from Turkey.

"I have seen exciting prospects in the areas of coal, bulk handling and physics during my visit and there is a common interest in research and development subjects," Mr Kaymakcalan said. According to Professor Alan Roberts, Mr Kaymakcalan's visit was important in terms of industry and higher education and that there was the possibility of postgraduate study programs and joint research programs being established.
RESEARCH AND SCHOLARSHIP RESEARCH AND SCHOLARSHIP RESEARCH

DETECTING FOETAL ABNORMALITIES

Medical technology is advancing at an incredible rate. Who would have thought, even ten years ago, that ultrasound viewing of the foetus in utero would become a standard procedure? Foetal heart rate and blood flow can also be recorded with ease.

Despite these developments, it is still difficult to predict those pregnancies where complications are not discovered until labour. This group, although the minority of deliveries, accounts for much of the morbidity and mortality of newborns. A group which has attracted particular attention is assisted deliveries (forceps, vacuum extraction and caesarian sections), many of which are performed because of uncertainty as to the well-being of the foetus.

An ambitious project, currently being undertaken by researchers at the University of Newcastle and the John Hunter Hospital, with funding from Digital Equipment Corporation, aims to develop a comprehensive and powerful foetal monitoring system. This system will combine a number of existing monitoring techniques and instruments to form a more versatile diagnostic tool, capable of diagnosing a broad range of foetal complications.

Digital Equipment's participation in and sponsorship of this research is driven by the belief that "computer technology remains under-utilised in the health care sector," says Mr Fred King, Manager, External Research at Digital.

"Healthcare is rarely adequately resourced, yet computers are able to contribute strongly to the effectiveness of many health care programs. This is especially true of the state-of-the-art computing that is to be used in this research," Fred said. Dr John Falconer and Associate Professor Warwick Giles from the University's Faculty of Medicine, and Dr Herman Villaneuva from the Department of Electrical and Computer Engineering, hope to apply the sort of computer technology once considered the domain of industrial processing plants, to the physiological situation.

"The need for improvements in the instrumentation can be seen from the failure of current techniques to improve outcome for compromised foetuses," John explained. A predictive value for the baby's health will thus be achieved.

Real-time ultrasound will enable medical experts to analyse the data as the ultrasound is taking place. A diagnostic decision will thus be made "on the spot", saving valuable time and money.

This ground-breaking technology will be used as a research tool in the early stages of the project. Researchers predict, however, that it will eventually (within three to five years) be incorporated into all ultrasound machines.

Although the percentage of babies born with late gestational complications is very low (1-2 percent), the cost to the community and the health service of perinatal care is enormous. "The early and accurate diagnosis of foetal problems, particularly in high-risk patients, assists in defining and planning management of pregnancy and allows for more economical use of hospital beds," John said.

For its part, Digital is keen to sponsor research which involves an "end-user" who will help define the requirements and then adopt the results.

'Research and Scholarship Program'

A pilot program which provides the opportunity for businesses to take on the role of 'mentor' to international students who are studying for their Master of Business Administration (MBA) at the University has already attracted local attention.

The program is being co-ordinated by Newcastle chartered accountancy firm, Lawler Davidson, and was recently launched by one of its principals, Mr Terry Lawler, who said local businesses, overseas students and the University could benefit from the program because of the interaction involved in the scheme.

The Dean of the Faculty of Economics and Commerce, Dr Winston Dunlop, said the program gave Newcastle business people the opportunity to learn more about how overseas businesses are operated and to develop networks and contacts in other countries. Students taking part in the mentor program are graduates with significant experience at supervisory or management level in their home countries such as Hong Kong, Thailand, China, Indonesia and Malaysia.

During the 10-week program overseas students will spend time with a local firm learning how they operate in the Hunter. At the same time they will undertake an advisory project for their 'mentor' company and will be able to share information with Hunter businesses on how the same project is handled in their home country. Winston said Hunter businesses will not only learn more about international practices in successful trading countries but networks that can be established could have significant spin-offs for the region.

The first intake for the pilot project has been subscribed. The Lord Mayor of Newcastle, Cr John McNaughton, was so impressed by the scheme at its launch that he volunteered Newcastle City Council participation.

Winston Dunlop
**ARE DEAD BOYS WINNING?**

"Young Australian males are dying at three times the rate of females, yet we still act as if boys were the winners in schooling and it is only the girls who need special programs." Are Dead Boys Winning? was the title of a paper presented by Mr Richard Fletcher at the Australian Council For Health, Physical Education and Recreation Annual Conference in Darwin in July.

Richard, a lecturer in the Faculty of Health Sciences, is concerned about the lack of a "boy-friendly" curriculum in our schools. "It is the boys who fill the detention groups and the remedial classes. It is boys who fill the juvenile justice system and who graduate to prisons," Richard said. "It is the boys who fill the hospital emergency rooms and boys who predominate in the morgues. Yet to look at the emphasis that Federal and State Governments place on identifying special needs for girls in our schools, you'd think every boy in the country had a gold pass to success, health and happiness," Richard added.

To highlight the poor health outcomes for males, Richard has compiled a booklet of Health Indicators for Australian Males and Boys. The booklet, which is published by the University, uses data from the Australian Bureau of Statistics and the Federal Office of Road Safety, to illustrate the poor health status of Australian males.

"In any one day in Australia there are 110 boys and 200 girls in custody. More than four times as many young males compared with young females will commit suicide, and more males will be murdered," Richard indicated.

These frightening statistics have led Richard to question the win-lose approach to male and female education in Australian schools. He says this is the kind of thinking that prevents the implementation of a National Strategy for Boys, to accompany the strategy already developed for girls.

"Even to ask 'Do boys have special needs?' is seen as an attack on girls' programs," he said.

There is some urgency in Richard's appeal to recognise the needs of boys in schools, as the first national curriculum for Health and Physical Education in Australian schools is currently being developed. And according to Richard this process is going ahead without the slightest recognition that boys have special needs in health.

"In fact, the only specific comment made in the Risk Taking section of the curriculum is that girls might be influenced by the media to take up smoking," Richard said. "In the classroom teachers will be facing an impossible task. The new curriculum doesn't acknowledge that there may be problems with teaching boys not to drink, not to drive fast cars, not to do wheelies on their bikes, not to harass girls, not to be aggressive," he said.

Richard does not hold a great deal of hope for the new Health and Physical Education curriculum. "The most likely result is that teachers will go back to their ball skills and coaching," he said.

"And in spite of a million dollar curriculum, the health of boys will not improve."

**IMPROVING SEMICONDUCTOR TECHNOLOGY**

Andrew Meair, a graduate from the Department of Electrical and Computer Engineering has been awarded the degree of Master of Engineering. His thesis entitled "Analytical, Design and Control of the Molecular Beam Epitaxy Growth Process and Ellipsometry Techniques for the Growth of Thin Film Structures" is the result of collaborative work between the Centre for Industrial Control Science and CEMTEK Pty Ltd. The aim was to investigate control strategies for improving the quality of a semiconductor manufacturing technology, called Molecular Beam Epitaxy. This process is used in the construction of many modern solid-state devices, including optical detectors and waveguides. The basic operation of this process is that several constituents (held in crucible), and a target material (called the substrate) are contained in a vessel at an ultra-high vacuum. The constituent materials are heated to high temperatures, and are emitted as beams of high velocity molecules onto the substrate. The beams mix on the substrate surface and a layer of alloy is formed. By controlling the temperature of each crucible it is possible to control the emission rate of each molecular beam and hence the growth rate and composition of the alloy layer on the substrate surface. In order to obtain the desired properties of the alloy it is necessary to control the composition to within 0.1% and to control thickness to within atomic dimensions. To obtain measurements of these quantities an optical technique called ellipsometry is used. This method relies on the properties of polarised light to infer measures of the alloy growth rate and composition. These measurements can then be utilised to correct errors that arise in the process.
A NEW APPROACH TO PILOT TRAINING

Professor Ross Telfer, Head of the University's Department of Aviation, says he has, over the past 15 years, deliberately sought a network of professionals in the aviation industry to contribute to the writing of his recently published book, *Aviation Instruction and Training*.

In writing the book, Ross adopted a unique approach of combining practitioners and academics in the field of aviation training. He says that in general and commercial aviation there is an emergent awareness of the importance of human factors in general, and of instruction in training in particular. "This book is both a response, and a further stimulus, to the new consciousness of the fundamental role of instruction and training in aviation," Ross wrote in the book's introduction.

"The book shows how professionals in the aviation industry and academic researchers complement each other in their pursuit of more effective and efficient training. Theory and practice each have a contribution to make: the first providing the conceptualization and scientific testing of possible solutions, and the latter contributing the depth of experience and expertise in the workplace. Each needs the other."

Contributions to the book come from regulatory authorities, airlines, universities, colleges, flying schools, the armed services, and private practice from a number of countries around the world. "Such a mix brings difference in approach and argument," Ross says.

The book is innovatory in its training methods and demonstrates that there is an emerging profession of flight instruction. A profession that, by its very nature, must encompass education, instruction and training. Ross says that this University's aviation department has been successful in demonstrating to industry that there are better ways to prepare pilots. But will airlines adopt the new techniques?

"Change is inherently slow," Ross says, "and this industry is based on tradition." He does add, however, that sheer efficiency and demands of training will force the changes. "Airlines are in a slump right now. They have relied heavily in the past on pre-trained personnel such as ex-airforce or general aviation pilots, but that pool is drying up. Airlines will be forced to train ab-initio pilots," he said.

The aviation degree program offered at the University is also unique in its approach to pilot education. The course, which is taught in four sessions, encompasses aeronautical engineering, aviation science, a "human factors" stream, and aviation management.

Students are trained to the commercial pilot level during the first two years of the course and are able to undertake additional flying qualifications in their third year.

"What we seek to do is to educate our students, not just train them," Ross said. "Much of what we teach may be seen as 'liberal studies' in the sense that it is not immediately applicable."

"We believe that our students will be more flexible and versatile and be able to keep pace with change, because they know how to learn."

"Aviation Instruction and Training" is published in the UK by Ashgate and was launched in a special ceremony at the International Civil Aviation Organization Conference, Washington DC, in April this year.

UNDERSTANDING ASTEROIDS

The same source that ended the reign of the mighty dinosaurs on Earth could spell extinction for humanity as well, an eminent Czech scientist told an audience at the University.

Speaking at a public lecture, Dr Zdenek Ceplecha said collision with an interplanetary body may have caused the dinosaurs to die out. Scientists have identified a giant impact crater in Mexico (Chicxulub) that was probably formed by an explosive impact between the Earth and a comet or asteroid. The dust thrown into the atmosphere by such a collision would make a long lasting darkness capable of destroying vegetation and, in turn, the dinosaurs, Dr Ceplecha said.

During the lecture, presented by Convocation, Dr Ceplecha said it was inevitable that life on Earth would end in a collision with a large interplanetary body. Without an active change in the orbit of the interplanetary body we would certainly not survive, he said. And while there has been several hundred million years between big collisions, it could come at any second. "We just do not know enough about individual bodies, the possible intruders, to guarantee that, in the next few days, a giant collision will not happen," Dr Ceplecha said.

Head of the Interplanetary Matter Section of the Astronomical Institute of the Czech Academy of Sciences, Dr Ceplecha has been studying these interplanetary bodies for 40 years. He took the first scientific photographs of a meteorite fall ever captured, at Pribram, Czechoslovakia in 1959.

But Dr Ceplecha's lecture was not confined to a doomsday warning. As well as the large collisions that destroy life, the Earth is also visited by life-bringing extraterrestrial forms. "If some giant body destroys all life, there is enough organic material and water in the numerous 10 meter and 100 meter size bodies to start life on Earth again," Dr Ceplecha concluded. These size bodies visited the Earth on an average of every ten weeks, he said.

While in Newcastle, Dr Ceplecha worked with Professor Colin Keay and his colleagues in the Physics Department to collate their various studies of meteors. Dr Ceplecha was visiting the Southern Hemisphere for the first time and enjoyed the opportunity to see constellations in the sky he had previously only seen in maps.
The seven chapter report investigated the structure and size of the Australian lyre Conference in Sydney.

The study found that there were about 13,000 tyre outlets in Australia, about 2,000 of which were specialist dealerships. The seven chapter report investigated the structure and size of the Australian tyre industry, the pattern of tyre distribution in the replacement market, control of tyre outlets in the replacement market, competition, performance and future directions.

Among figures collated were that independent dealers comprised the largest group of tyre retailers, holding 46.6% of the market in 1999. They were followed by manufacturer owned outlets (24.3%), independent retail chains (11.7%), buying groups (7.6%), product distribution franchises (5.7%) and franchised outlets (4%).

John said a common concern expressed by distributors at various stages of the tyre supply chain was the profitability of their particular operation. He said there were three broad areas which dealers perceived as affecting their profitability: the efficiency of their business operations, the demand for their product and the market structure and supply conditions in which they operate.

John said the study focused on problems common to various groups rather than the interests of particular strategic groups. "The question was whether there are common strategies which can be developed and our findings came up with two recommendations. The structure of supply and distribution outlined in the study points to a very uneven bargaining power which generally favours suppliers, and some suppliers more than others. This is the basis for being concerned about their profitability, the authors claim."
THE SUBTLE EFFECTS OF STRESS

According to Dr Peter Pfister, from the Psychology Department, women should avoid placing too much stress on themselves during pregnancy and lactation. Peter defines stress as any kind of excess pressure, such as family pressure, exams, work stress, and other more subtle pressures put on women in relationships.

"Most women today are aware of the effects of smoking and drinking on the developing foetus," Peter said. "But women must also be aware of their psychological stress levels and the demands they place on themselves. They have to be aware that the foetus may not be as protected from stress effects as we have been led to believe."

"The most obvious indicators of stress are apparent in pregnant women who feel emotionally drained, who feel helpless and are churned up internally," Peter said, adding that sudden outbursts are a sure sign that things aren't quite right.

"Planning a pregnancy requires a lifestyle change which often includes changes to diet, general health and psychological wellbeing," Peter said. "Women are generally aware of the first two factors, as are their partners, however both need educating about the importance of psychological wellbeing," he commented, adding that the male partner has an extremely important role to play in terms of a woman's psychological wellbeing.

Despite significant advances in medical research, doctors are still uncertain as to the level of protection offered to the developing foetus in utero. Peter's group believes that maternal psychological stress during pregnancy may lead to cognitive impairment in the offspring. Cognitive impairment may result in the offspring not being able to acquire or to deal with knowledge adequately.

According to Peter, rat pups born to a rat which was distressed during pregnancy will cope poorly with cognitive tasks. "The behaviour of these rat pups is not unlike that of children unable to cope in school," he said.

Research has shown that post-natal stimulation is very beneficial to a child's cognitive development. However, pre-natal stress followed by post-natal stimulation will lead to impairment of cognitive function. "It seems that combining pre-natal stress with post-natal stimulation exacerbates the problems encountered with pre-natal stress alone," Peter said.

Peter explained that no mechanisms have been found to date to reverse this dysfunction.

His group is interested in the neurochemical and structural changes occurring in the brain of the developing foetus to determine how maternal stress causes changes at these levels. Cognitive problems, he says, have an underlying biological dysfunction. Examples of cognitive dysfunction may be seen in Attention Deficit children, and in individuals or groups displaying "risk-taking" behaviours. A better understanding of the processes resulting in cognitive impairment in newborns may assist the Newcastle team to develop intervention techniques. "Although these intervention techniques may not enable us to reverse the process, they may allow us to at least alleviate some of the problems," Peter said.

HOW HEALTHY IS YOUR HEART?

Coronary Heart Disease (CHD) is the leading cause of death in Australia and a major cause of morbidity. Although there has been a decline of almost 70% in heart disease mortality over the past 25 years (due to behaviour changes and advances in medical management), the Hunter area has among the highest rate of Coronary Heart Disease in Australia.

In view of these frightening statistics, heart disease research commenced in the Hunter in 1979. A heart disease surveillance program was established and participation in the World Health Organisation's MONICA Project, to monitor trends and determinants of cardiovascular disease, began.

The University's MONICA Centre is one of over 30 Centres around the world involved in this 10 year international project which concludes next year. Professor Annette Dobson, from the Centre for Clinical Epidemiology and Biostatistics, and director of the project, explained that MONICA monitors all suspected heart attacks and coronary deaths in residents of the Lower Hunter Region aged under 70 years.

"The medical treatment patients receive before and during the acute event is also recorded," Annette said.

The project includes risk factor prevalence surveys on random samples of the general population in the Hunter area. Simple ways of monitoring health outcomes for CHD patients, based on routinely collected clinical and administrative information, are also being developed.

Annette pointed out that within the Hunter, the Coalfields district has the highest level of heart disease and high levels of coronary risk factors. "More broadly, it has many of the socio-economic characteristics associated with risk of poor health," she added.

Researchers within the University's Centre for Clinical Epidemiology and Biostatistics are conducting a three-pronged project. The three projects are: a community development primary prevention program in the Coalfields; a program of secondary prevention and rehabilitation for people who already have evidence of coronary disease; and lifestyle interventions to reduce the risk in people whose relatives have had a heart attack and who may themselves be at increased risk.

"Promotion of heart health has been undertaken through a co-ordinated sequence of activities focussed in the home, shopping centres, schools, workplaces and social clubs," Annette said.

Current research being conducted by post-graduate students at the University includes an evaluation of the Kurri Kurri Primary School Healthy Heartbeat Project; a sociological examination of the incongruence between heart health promotion messages and local culture, including health ideology, gender and beliefs about the human body; and a project aimed at helping people reduce fats in their diet.

Annette said an important aspect of the study is secondary prevention and rehabilitation. "Recent activities have moved beyond the biomedical aspects to investigate the anxieties expressed by heart disease patients and their relatives; the role of counselling; and the psychological and social barriers to behavioural change."

Researchers hope that this comprehensive project will result in a greatly reduced incidence of coronary heart disease in the Hunter Region and a greater understanding of health and dietary issues in general.
Dear Editor

Mrs Culph

I've gotten myself into a bit of a muddle (again) for coming across in a negative way in the fourth edition of Van Gogh's Ear (I'm Going to Make a Million out of this...aren't I?). I can't deny that I approved the copy, but I should have perhaps pointed out that the article was excerpted from a presentation I made to a Malaysian audience in December last year. Things move surprisingly quickly in this business that much of what was said then has already been dated. For example, our Botanics technology licensee, MM Holdings Limited, has made sales into America, Canada, South Africa and the Philippines, as well as Nigeria, and has test work underway in the UK, Europe and Africa.

Intellectual property is worth identifying, protecting and exploiting, all in the context of "keeping one's feet on the ground" commercially. The inventive steps are a crucial part of a protected process which needs sustained and energetic commitment from all players, including the inventor, before the fruits of success can be enjoyed.

It can be done, and it is happening at the University of Newcastle: we're proud to be part of the process.

Karel Grel
Managing Director TUNRA Ltd

Dear Ms Duncan,

I am writing in regard to the article on Genetic Engineering in Issue 1, 1993 of Uninews, at page 4.

The comments made on the ethics of genetic engineering seem somewhat vitriolic, and stand in need of challenging.

Firstly, one must challenge the statement that in the US the "debate surrounding the ethics of genetic engineering is at a more advanced stage," as it is true that the US is more advanced in the release of genetically modified organisms into non-laboratory environments, but this is a reflection of the political climate of the bio-technology industry than the abatement of community concern.

Next there is the statement, implicitly accepted by the author of the article, "that if the product is safe for consumption then the question of whether the product was produced by genetic engineering or more traditional technology is irrelevant." Rather, I would suggest that the safety of consumption is irrelevant. The main concern with recombinant DNA technology is not that the engineered organisms are biologically "afters"; rather, it is the wider environmental impact that is of concern. Rabbits, for example, are quite safe for consumption, but are hardly environmentally friendly.

The concern is that genetically modified organisms may have no natural enemies and may become pestilential. Unfortunately we Australians have a questionable record in regards to the introduction of new organisms into the environment.

Of course, it is quite arguable that new strains of pre-existing organisms may be introduced without harm, for example, new strains of wheat. However, your article makes a blanket statement which does not state the degree of genetic modification that is being pushed.

Further, there is a real concern that genetic engineering may lead to a genetic monoculture, which would be extremely susceptible to disease. This is more so where we are looking at cash crops, where the most productive strain, by dint of market forces, becomes the dominant strain as well. Genetic diversity, even among cash crops, is to be preserved, and it is a real concern that proponents of genetic engineering need to address.

A final concern is that of the impact of non-human genetic engineering techniques upon human genetic engineering. Will there be a commoditisation of techniques between humans and non-human genetic engineering, and so how do we regulate its impact upon humans?

Of course one agrees with Professor Rose that "genetic engineering should be given a 'fair hearing';" undoubtedly it has great potential for benefiting humanity. However, there are also a large number of concerns, a few of which I have canvassed above. These concerns need to be addressed; unfortunately the article in the Uninews glosses over them and paints a distorted picture of ethical concerns about genetic engineering.

Yours faithfully
Keith Joseph

The article in Uninews (Issue 1, 1993) referred to by Keith Joseph is based on information supplied by or in relation to a plant genetic engineering project. The article is clearly not a comprehensive generic consideration of genetic engineering safety and ethics, but I believe it is important that Biologists involved in genetic engineering comment on concerns raised about their work. In general, researchers using recombinant DNA have raised and addressed concerns raised about the technology. I would make the following comments on the points raised in the letter.

Reference to US bio-technology policy; I felt that the conclusion was important, that in relation to bio-technology products the use of a genetic engineering process does not in itself make a product unsafe. It has been my observation that US regulations on biological products, within their own country, are usually strict. I would agree with the argument that it is the end product or objectives of the genetic engineering that need to be evaluated so that they do not pose risk to human health or the environment and are regarded by the community as ethical.

In relation to concerns about environmental effects of genetically engineered plants, major concerns are in relation to the genetically engineered plant being a "pest" ("weediness" or "weediness"), escape of genes through pollen and inbreed hybridisation or subtle effects on soil flora or fauna. Experiments have been carried out to test such concerns and at this time there is no evidence to suggest that in relation to these concerns a genetically engineered plant is going to be any different to a plant that has been bred in the traditional way (e.g. Crowley et al., 1993 Ecology of transgenic oilseed rape in natural habitats. Nature 363, 602). Irrespective of the experimentation, as such a wide array of genetic variation is available only a relative assessment of risk (based on experimentation) can be given. These latter considerations have to be weighed against positive benefits which I believe are the contribution to ecologically sustainable agriculture on a crowded planet.

Problems that may occur with genetic monocultures are well known to genetic engineers. Genetic engineering can actually help this problem by increasing the pool of genetic diversity and facilitating new genetic approaches to pests and disease, that is, so that reliance is not on one gene product. In relation to the plant group we are working with for breeding purposes there are three integrated components in a national program; (a) a plant introduction program, that is, a "gene bank" of many ecotypes; (b) a traditional plant breeding program and (c) a genetic engineering program. Genetic engineering can introduce those attributes not readily available in (a) or (b). As far as the impact of non-human genetic engineering techniques upon human genetic engineering, there is a rapid flow of molecular genetic concepts between organisms. Most of the knowledge of molecular genetics, however, derives from bacteria, viruses and mammalian cells. I regard plant genetic engineering as a new extension of plant breeding and the introduction of inherited characters in plants should be seen in this context. Selective breeding in humans has always been regarded with anathema, and I believe that genetic engineering of the human germline for heritable traits should be regarded in the same way.

Ray Bore
Biological Sciences
AUGUST

DAY EVENT
3 Convocation Inaugural Lecture at 12.30 pm
   Professor Bruce McFarlane “The State and
   Economic Growth” Medical Sciences Theatre
   - K202. Further enquiries 21 6459
5 Local Campus Band Competition Final
   Further enquiries to University Union 21 6013
6 The University of Newcastle Blues Dinner
   Further enquiries to Sport and Recreation Office
   21 5583
7 University Choir Great Hall at 8pm
   Mendelssohn “Elisabeth” Further enquiries 63 2237
9 “Facing Death” A 12-week course offered by
   the Faculty of Nursing. Further enquiries 21 6304
12 Convocation Inaugural Lecture Professor
   W Pengilly (Lecture Theatre) David Maddison
   Building at 5.30pm Royal Newcastle Hospital.
   Further enquiries 21 6459
16 Drama Department Production
   “The Removalist” Greenroom of The Great Hall
   (to 21/8/93). Further enquiries to Department of
   Drama 21 5001
26 Annual General Meeting of Convocation
   7pm - Southern Cross Lounge, Shortland Union.
   Further enquiries 21 6459
30 University Review Further enquiries to
   University Union 21 6013

SEPTEMBER

DAY EVENT
8 Campus Scamper An annual fun run in which
   staff and students participate.
10 The Newcastle Lecture Sponsored by
   University Convocation. To be delivered by
   Paul Lynehan 6.30pm - Great Hall, Cabbage
   Campus Further enquiries 21 6459
13 University Environment Week
   (continues until 18/9/93) Further enquiries to
   Physical Planning & Estates Office 21 6500
17 The Hunter Orchestra “The Discovery Series”
   Conservatorium Performance Hall at 8pm.
   Further enquiries 29 4305
University Union Annual Dinner
   Further enquiries to University Union 21 6013
26 Semester II Recess Commences
   Concludes 8th October

OCTOBER

DAY EVENT
12 Drama Department Production
   “A Man for all Seasons” Drama Theatre
   (continues until 23/10/93). Further enquiries to
   Department of Drama 21 5001
13 Convocation Inaugural Lecture by
   Professor Sid Bourke “Measuring Attitudes
   in Educational Research” -
   Medical Sciences Theatre - K202 at 12.30 pm.
   Further enquiries to Convocation Officer 21 6459
16 Drama Department Production
   “A Director’s Perspective” Drama Studio.
   Further enquiries to Department of Drama 21 5001
25 Exhibition of Design (Final Year students of
   Graphic Design and Industrial Design) Sydney
   Opera House (Continues until October 30)
29 Hunter Orchestra “Discovery Series”
   Conservatorium Performance Hall at 8pm.
   Further enquiries 29 4305
31 University Choir Unaccompanied Concert
   Venue and time to be advised.

NOVEMBER

DAY EVENT
1 Final Year Architecture Students Exhibition
   Red Square Architecture Building.
   Further enquiries to Faculty of Architecture 21 5771
Exhibition of Design at the Newcastle City Hall
Final year Graphic Design and Industrial Design
students exhibit their work.
   (Continues until Friday, November 5)
6 Semester II concludes
9 End of Year Examinations commence
14 Opening of Exhibition 7.30 pm
   Final year students - Graduate Diploma in Art
   On show to public until November 22.
   Further enquiries to Department of Fine Arts 21 6258
26 Hunter Orchestra “Great Masters Series”
   Great Hall at 8pm Further enquiries 29 4305
Opening of Exhibition at 7.30 pm
   Final Year Students - Bachelor of Arts (Visual
   Arts) and Bachelor of Education (Art Education)
   Fine Art Building and Hunter Building. On show to
   public until December 3. Further enquiries to
   Department of Fine Arts 21 6258

DECEMBER

DAY EVENT
10 Hunter Orchestra and University Choir &
   Waratah Singers Christmas Concert -
   Great Hall at 8pm. Further enquiries 29 4305
UNIVERSITY RECOGNISES EXCELLENCE IN TEACHING

A lecturer who specialises in the areas of science and technology and also creative and practical arts has been recognised as the most outstanding teacher at the University. David Corney from the Department of Pedagogical Studies will receive a total of $6000 to assist him in pursuing academic excellence. Long recognised for his knowledge and expertise in teaching early childhood and primary undergraduate teacher education students, David was selected by the University’s Teaching Committee.

The Vice-Chancellor, Professor Raoul Mortley, said David was one of three lecturers and one department to receive an award for ‘Excellence in Teaching’ following the implementation of the scheme this year. He said the awards were established to give prominence to the importance of high quality teaching in the University and to reward and encourage excellence.

“Excellent teaching describes academic activities which facilitate high quality student learning,” Professor Mortley said. “Such activities might include face-to-face teaching, co-ordination of a process which leads to better learning or strong management in team teaching.”

The awards are open to academic staff who have taught at the University for at least two years or to teaching teams where more than one person has been responsible for the design and implementation of one or more subjects. A maximum of five awards will be available each year, the inaugural awards being presented for 1992.

The other recipients of the major awards are Trish Jacobs from the Faculty of Health Sciences, Simon from the Faculty of Engineering, and the Department of Social Work. Ms Jacobs, Simon and the department will each receive $5000 to assist in their continuing pursuit of academic excellence. David, in addition to a $5000 grant, will receive a $1000 grant as the most outstanding teacher.

The Teaching Committee also made ‘High Commendation for Teaching’ awards to Ian Cook (Faculty of Music) and Dr Ian Webster (Faculty of Engineering). Each will receive a grant of $2000. Commendation Certificates were presented to Bruce Cook (Faculty of Health Sciences), Associate Professor Rob Cowdroy (Faculty of Architecture) and James Hunt (Faculty of Economics and Commerce).

Professor Mortley hopes the announcement of the inaugural awards will encourage more nominations from academic staff at the University, which already has a proud record of teaching excellence.

Professor Mortley, said, listing the principles as:

- present well structured and relevant teaching;
- support teaching with developmentally appropriate inputs, resources and activities;
- generate a stimulating environment which is conducive to learning; and
- provide encouragement and meaningful feedback of student performance.

David’s long and varied career has seen him involved in course committees for degree programs in Primary and Early Childhood. He also has had significant input to the subject areas of Creative and Practical Arts and the recently introduced Science and Technology syllabus.

David said that throughout the years the faces before him have changed many times and the subjects in which he has lectured have grown in diversity as the duration and rigour of teaching education courses increased.

“Throughout this period of new and challenging developments, my approach to teaching has embodied the same basic principles,” David said, listing the principles as:

- be enthusiastic and demonstrate a positive manner to teaching;
- take a sincere interest in students;
- possess a sound knowledge of the subjects professed;
- provide students with clearly defined

HANDS-ON LEARNING

In his submission to the Teaching Committee, David Corney stated it had always been his belief that teaching should be a process which provides the learner with opportunities to acquire experience through first-hand interaction with resource materials.

He wrote that “hands-on” learning stimulates interest, promotes and consolidates understanding and provides an enjoyable, rewarding experience for the participant. David’s professional career has spanned 35 years of teaching, the first eight as a teacher with the NSW Department of Education and the past 27 as a lecturer in the tertiary sector of teacher education.

Well-known and well-liked by his many students and colleagues throughout the years, David said curriculum development has always maintained a high priority in his commitment to promoting the quality of teaching. It is through constant evaluation and review of curriculum content that the quality of a course or subject is enhanced, David says.

YOU CAN’T BEAT IT

subject documentation which identifies objectives, content to be covered and assessment procedures;

- present well structured and relevant teaching;
- support teaching with developmentally appropriate inputs, resources and activities;
- generate a stimulating environment which is conducive to learning; and
- provide encouragement and meaningful feedback of student performance.

David, who has always encouraged his students to explore the differences between practical and theoretical aspects, will use his $6000 to purchase video editing equipment for use by himself and his students. The equipment will be another tool to further enhance his teaching capabilities, and also those of his students.

The news of David’s success and those of other award winners has been well received on campus. There is little doubt that David has set the standard for others to follow.
WHAT YOU CAN DO WITH A PAIN IN THE NECK

During the Easter holidays, 19-year-old apprentice chef Tracey Andrews had an experience that most beach-loving people have at least once in their life.

While surfing at a Taree beach, Tracey was dumped. But instead of picking herself up, sandy, embarrassed, or both, Tracey landed in Taree Hospital where, for the next 21 hours, she was unable to move any part of her body. She had cracked the C5 vertebra in her neck.

"I'm surprised it hasn't happened to more people. It is so easily done," Tracey said.

According to doctors, if Tracey had not been a competition platform diver with strong neck muscles, she may not be walking today.

Unfortunately for Tracey however, the many water sports she enjoys, particularly diving, are strictly off limits from now on.

However, the accident has not slowed her professional ambitions for a successful career as a chef. She has an impressive track record in the hospitality industry which includes Apprentice of the Year in 1991 and Bronze Medal winner at the Salon Culinaire titles in 1992.

At the time of the accident, Tracey was unaware of her selection to compete in the national "Golden Chef's Award" held in Perth recently. She was one of only three apprentice chefs chosen to represent New South Wales, the others from the Hilton Hotel and Spotless Catering in Sydney.

Tracey won a medal in each of the three categories she competed in and has now added another silver and two bronze medals to her ever growing collection.

Tracey Andrews - representing NSW

PACIFIC CONFERENCE IN TAHITI

Dr Marie Ramsland, from the French Section of the Department of Modern Languages, is brimming with enthusiasm about a conference she attended recently in Tahiti where she presented a paper entitled "La Jeunesse eternelle de Robinson Crusoe".

The three-day conference, which explored the theme 'Magic and the Fantastic in the Pacific', brought together Tahitians and Polynesians, as well as people from Hawaii, New Zealand, Australia and France. Its main aim was to gather together scholars from the Pacific Region to look at problems in the Pacific.

Marie said her paper was about the Robinson Crusoe myth rewritten with a post-colonial approach by Michel Tournier. She said in Tournier's novel, "Vendredi ou les limbes du Pacifique", the main idea was that he actually changed the setting of Robinson Crusoe from the Atlantic to the Pacific with the idea that it's the exotic and there is magic and fantastic in everything.

As for the content of her paper, Marie said the basis of the rewritten novel was the myth of the Noble Savage that arose with the discovery of the New World where Tournier emphasises the unusual, but beneficial dimensions of a life as yet uncorrupted by 'civilisation'.

SISTERS EXHIBIT EMOTIVE ARTWORKS

SENTIRE: the latin word for sensitive, emotive and to feel.

The word was used to describe a recently held art exhibition at the University's Art Gallery, WATTSPACE, an exhibition which displayed the works of eight final year artists from the Bachelor of Arts (Visual Arts) course.

It was the linking of the artists feelings and emotions while the artworks themselves were created from mixed media and fibre materials such as bark, plaster, hand made paper, latex, glass, Chinese burial paper and many other materials. Excitement was generated by the fact that there were no traditional constraints or boundaries associated with the use of materials or media.

For two of the artists, it represented a particular set of emotions. Sisters, Debbie Noakes and Roslyn Hosking, both exhibiting for the first time, took the opportunity to explore their Aboriginal ancestry, with stunning results.

Debbie's work represented cultural differences experienced in childhood; being caught between being Aboriginal and being white. She said that when she played with white children they would say, "Go away, you're black," whilst her Aboriginal cousins would say, "Go away, you're white."

Roslyn on the other hand, based her work on being the odd one out when a child. "Being an Aboriginal with red hair is a big problem when you are growing up," she said.

"We started off by doing an Aboriginal Bridging Course and then progressed to the art course where we both felt comfortable," the sisters said.

"The exhibition has been an exciting and meaningful exercise for us, not only as an avenue to explore our ancestry and our feelings, but our link as sisters as well," they said.

Roslyn Hosking - first exhibition
DRAMA AT WOLLOTUKA

There is drama afoot at Wollotuka—and it’s exciting stuff. There are students with an unusual light in their eyes, staff waxing lyrical about an unusual project and everybody keeping an appointment each week with meticulous timing.

The project is a collaboration between Wollotuka and the Drama Department and involves Aboriginal students in courses across the University, undertaking a pilot course called “Uses of Drama.”

Lecturer in Drama, Dr Barry O’Connor, says the course is being conducted in consultation with the educational workers at Wollotuka. It involves two students in the “Uses of Drama” course (part of the Drama strand of the Bachelor of Arts), Ms Elaine Dawson and Ms Sally Freeman, who take the students through a series of drama techniques.

Barry says the ideology of “Uses of Drama” is community empowerment through social and educational intervention. He says it is a course which gives students an opportunity to experience and explore the use of drama techniques in non-theatrical venues.

“The drama techniques involve improvisation, game playing, play-building, relaxation and other forms of group dynamic activity,” Barry says.

“The interesting thing is that drama doesn’t always have to happen in a theatre. We have presented this course in many non-theatrical venues such as schools, hospitals and community groups.

“Throughout the history of the course, students have been placed in primary schools, secondary schools, pre-schools, child-minding centres, Richmond Scheme Houses, TAFE run courses for women re-entering the work force, the James Fletcher Hospital occupational therapy, and psychodrama programs,” he says.

Meanwhile the students at Wollotuka are enjoying themselves, the role playing taking on a serious flavour as cultural and social issues are explored. And they are learning to see the dramatic possibilities in situations that they previously saw as being everyday events.

TREES ON CAMPUS

A group of this year’s graduates by-passed the traditional plaques and tie pin mementoes in favour of a more unusual commemorative gesture; they planted a tree. For $15.00 the 1993 graduates sponsor a gum tree to be planted on campus, with a commemorative plaque alongside.

Organised by Convocation, the University’s graduate body, in cooperation with Grounds Curator, Mr Peter Stevens, the trees offered for sale were all eucalypts native to the Jesmond forest. Seventy-five graduates, with degrees in a variety of disciplines, chose to plant a tree to celebrate their graduation.

Many saw the trees as a way of retaining some sort of presence on the campus. Husbands and wives asked to have their trees planted close together and a proud Commerce graduate asked to have two plaques on his tree, one for his father, a 1962 Newcastle Arts graduate.

Some staff members also purchased trees, asking to have them planted outside the buildings in which they worked, with six people from the Management Unit chipping in a couple of dollars each to sponsor a tree.

Peter Stevens, keen to gain sponsorship to assist in his vision of greening the entire campus, is extremely obliging about where the trees can go. As long as there is no building work planned and the positioning doesn’t threaten existing buildings, he is happy to have trees and shrubs proliferate.

The majority of the 1993 graduates’ trees have been planted on the freshly mounded and mulched slope at the edge of No. 4 sportsfield, behind the Chancellery building. Some graduates chose to plant their own trees on the day of their graduation ceremonies and these are situated alongside the Great Hall.

So why not sponsor your own tree and watch your connection with this campus flourish and grow.