Is netball a health hazard?

Research being undertaken in the Department of Human Movement by Julie Steele was featured on the 60 Minutes program on Channel 9, on 14 June.

The program explored the possibility that players may be in danger of developing serious and non-reversible injuries to knee joints that could be avoided, or reduced, by simple changes to the rules of the game.

With the assistance of funding from the Australian Sports Association, Julie has been conducting research into netball injuries since 1984.

After the program, Julie was inundated with calls from concerned parents, players, doctors, members of the netball association, and the Sports Commission.

Preparing for research into netball injuries.

Wollongong survey indicates research infrastructure shortfall

Research in Australian universities is being threatened by a shortfall in infrastructure funding, a survey has found.

The survey was commissioned by the Australian Vice-Chancellors' Committee and conducted by Dr Penelope Murphy under the supervision of Professor Stephen Hill of the Centre for Research Policy at the University of Wollongong.

It provides a snapshot of university research infrastructure.

The study concludes that, based on an indicative study of Australian research infrastructure and some comparison with overseas experience, a shortfall of infrastructure funding is 'seriously affecting the present conduct of university research at an internationally competitive level'.

The most serious impact of infrastructure funding shortfall that was revealed through the present surveys was...
Survey indicates research shortfall

From page one

was inadequacy of support for the maintenance, repair and upgrading of equipment. Equipment grants through Commonwealth schemes are not accompanied by maintenance and technical support funding.

The study has discovered ‘numerous cases’ of departments which could not afford the cost of maintenance or repair of new equipment. Personnel were seriously concerned about the possibility of major breakdowns. There were ‘despondent’ attitudes about equipment levels across the institutions surveyed.

The study noted that equipment was becoming increasingly more sophisticated and obsolescence time is decreasing.

There was evidence of shortfalls in library research collections, which appeared to be particularly affecting social sciences and humanities. The cost of such information was rising faster than the level of national inflation.

The study briefly reviewed current mechanisms for funding research infrastructure and said that the evidence concerning its effectiveness was incomplete.

‘What evidence there is suggests that the mechanisms are working as intended and should not at this stage be changed dramatically,’ the study said.

It recommended a further review of the effectiveness of research infrastructure needs throughout the Australia research system.

The review could focus on the identification of present capital stock and the existing formula for its maintenance; identify levels of cross-over strain related to teaching requirements and increased load; focus on the needs of universities of varying types and stages of development; explore ways of managing the particular situation of newly emerging fields and research groups; and identify different kinds (and levels) of infrastructure support requirements in different disciplines.

In response to the CRP study, the AVCC has called for a reference to the National Board of Employment, Education and Training into research infrastructure funding.

The outcome of the study supports the AVCC argument for increased funding of research infrastructure.

In its recent policy statement, Australian universities in a changing world, the AVCC recommended an increase in funds for infrastructure support, through the Australian Research Council Infrastructure Program, from $51.7 million in 1992 to $75 million in 1993, $85 million in 1994 and $100 million by 1995.

The CRP study said the Government needed to send consistent signals to industry about full-cost funding research.

It recommended that a protocol be built into government practice to provide full-cost funding for all research contracts to universities.

It recommended also that equipment maintenance budgets should be built into equipment allocations and grants that are provided through government grants.

It called for a change in attitude toward university research.

‘In promotion of Australia’s national innovation system university research infrastructure expenditures must be seen as a national investment rather than a private cost.’

Summary of Main Findings

• Based on an indicative study of Australian evidence and some comparison with overseas experience, there is a global shortfall in the level of infrastructure funding that is provided by government to support Australian higher education research.

• Global shortfall in infrastructure appears to be seriously affecting the present conduct of university research at an internationally competitive level. Particular impact across the whole university system is on the technical support of equipment and facilities in laboratory based subjects; shortfalls in library research collections appear to be particularly affecting social sciences and humanities.

• Evidence concerning the effectiveness of present mechanisms of infrastructure delivery is incomplete. What evidence there is suggests that the mechanisms are working as intended and should not at this stage be changed dramatically.

• There is a need to preserve more general research infrastructure funding of universities outside the support of directly funded research. The need to develop more generalised facilities together with long time frames required for technical and research skills development make this imperative.

• In promotion of Australia’s national innovation system, university research infrastructure expenditures must be seen as a national investment rather than a private cost.

Photography Professionals

The University of Wollongong is seeking expressions of interest from experienced photographers to take a series of promotional photographs for use within a wide range of University publications and advertisements.

Subjects include buildings and grounds, individuals and groups, scenery and wildlife, events and exhibitions as well as specific themes and locations.

Write to: Paul Coster, Planning & Marketing Department, University of Wollongong, Locked Bag 8844, South Coast Mail Centre, NSW 2521.

Detailed proposals must be received by 10 July 1992.

Calling all sports

The Recreation and Sports Association is holding Round 2 of the IPEX Interdepartmental Sports Games from 6-17 July.

Sports on offer are: Monday and Wednesdays: volleyball; Tuesdays and Thursdays: basketball; Fridays: softball. The games would be held from noon-2pm.

If your department is interested in playing these games contact the Recreation and Sports Association with details of the sport(s) you wish to compete in, the department and contact person.
Mr Peter Quelcher, Senior Loans Officer congratulated Sandra Leigh, second year student in the Department of Materials Engineering who won the Commonwealth Banking Corporation prize.

Faculty of Engineering announces its winners

The Faculty of Engineering held a function this month to award the increasing number of prizes that are generously being donated by organisations in the community which are strengthening their relationship with the University.

The winners for 1991 were:

**Department of Civil and Mining Engineering**
The Australasian Institute of Mining and Metallurgy (Illawarra Branch) Mining Prize
CHARLES RICHARD GOLDSMITH

The Western Mining Corporation Prizes for Mining Engineers (two prizes)
- Best Academic Record: DAVID WEBB
- Best Thesis: SCOTT ALEXANDER GRAHAM
- Elizabeth Tague Prize: MARK JOHNSTON
- Peter Schmidt Memorial Scholarship: YAO BAO ZHONG

Joint Coal Board Prizes
- Year 2: DEAN SORLEY
- Year 3: LIP HEN TEH
- Most Proficient: DAVID WEBB
- Metal Building Products: JOSE GONZALEZ

**Department of Mechanical Engineering**
Sam Marshall Prize for Mechanical Engineering
Undergraduate Thesis

**Department of Materials Engineering**
The Australasian Institute of Mining and Metallurgy (Illawarra Branch) Materials Prize
BRYAN ANDREW SHEDDEN and RISMAN ROBIN CORNELIUS

Institute of Metals and Materials Australasia (Wollongong Branch) Materials Prize
- JARI PETER HYVARINEN

BHP Steel, Slab and Plate Products Division Materials Prize
- DAVID JOHN LANGLEY

Commonwealth Banking Corporation Materials Prize
- SANDRA MICHELE LEIGH

BHP Steel, Colorbond Materials Prize
- JARI PETER HYVARINEN

Metal Manufacturers Prize (three prizes)
- Prize 1: SANDRA MICHELE LEIGH
- Prize 2: DAVID JOHN LANGLEY
- Prize 3: DAVID JOHN LANGLEY
The Manager, Buildings and Grounds, K.E. Turnbull, reports that the Roads and Traffic Authority has completed work on the design for a footbridge linking TAFE and the University.

He said work will soon begin.

The University has made a small portion of land available at the South Eastern corner of the Campus for the western end of the footbridge.

He also reports:

• The University Council has approved the awarding of a tender for the construction of an additional 55 student accommodation places at Campus East.
• These additional places will bring the total places available at Campus East to 369.
• The total project has a budget of $1.525m. and the building contract has been awarded to local company Bolton Construction's which recently completed the latest Union extension.
• Construction will commence later in June and completion is expected by March, 1993.
• Following the recent completion of the design documentation tenders have been called for a major refurbishment of the Union Hall which can no longer cope with the requirements of a University of our size.
• This $3.7m. project is being funded from a $1.6m. refurbishment grant from the Commonwealth Government, $1.6m. from University sources and $500,000 from the Union.
• The refurbishment and alterations will provide an upgraded general purpose facility with an auditorium capacity of 1000 seats.
• The new hall will be large enough and have the facilities necessary for a range of activities including graduation, ceremonial functions, examinations, conferences, concerts, dances and social functions.

Following acceptance of a tender, construction will commence in July and completion is expected by March, 1993. Naturally, the existing hall and some adjacent areas will be unusable during this time.

• Work has commenced on the fit-out of the top floor of the new Union extension, i.e., the level above the new Function Room area.

When complete, Level 3 will provide new accommodation for the Counseling Service, the Careers and Appointments Office and the new Development Office which includes Alumni, Co-operative Education, the Foundation and the Friends. The fit-out should be completed by the end of August.

• Following the allocation of special funding for the purpose, work will soon commence on a deferred maintenance programme for Building 1.

The work will include rectification of concrete windows, external and internal painting and general upgrading. Such work costing $140,000 is beyond the scope of the general maintenance programme and it is hoped that similar programmes can be implemented for some of the other older buildings on Campus.

• In an effort to improve the safety of pedestrians using the crossings outside the Recreation and Sports Centre (often used by children) and the Hope Theatre, speed humps have been placed on either side of the marked crossings. Regrettably, it has become necessary to install the humps to inhibit those drivers who ignore the speed restrictions and put pedestrians at risk.

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**Children's Christmas Tree**

The Children's Christmas Tree Committee will be selling tickets for a raffle to raise funds for the children's Christmas Tree function to be held later this year. Tickets are $1 each and will be drawn the Wednesday after Open Day.

1st Prize: TV Plus Unit to House the TV
2nd Prize: Walkman
3rd Prize: Lunch for Two at the Bistro

A book of ten tickets will be sent to those staff members whose children attended the Christmas Tree last year. Please try and sell them to your friends and family and of course buy some yourselves.

Tickets also available from Lionel Ransley Printery, John Duncan Purchasing, Ian Mitchell and Paul Attard Maintenance, Roger Davey Salaries and Steve Petrou Electrical and Computing Engineering.

Ticket butts, unsold tickets and money must be returned to Lionel Ransley Printery by Monday 31 August.

Please support your children's Christmas Tree by selling as many tickets as you can and don't forget our Sausage Sizzle on open day.
Talented Year 10 students from schools in the Illawarra and the south-west of Sydney visited the Faculty of Science on 19 and 20 June to see what it is like to study science at university and to be encouraged to consider undertaking studies in science when they complete their Higher School Certificate. Over the two days 300 students were welcomed to the University by the Dean of Science Professor Murray Wilson and entertained at the Magic Chemistry Show. During the day they visited each of the departments of Biology, Chemistry Geography and Geology.

HARKNESS FELLOWSHIPS

For Study and Travel in the United States, and the advancement of Australian - United States Relations.

Up to FOUR FELLOWSHIPS, tenable for between 12 and 21 months are offered. The award includes return fares to the United States, living and family allowances, travel in America (with car rental allowance), tuition and research expenses, a book and equipment allowance and health insurance.

Candidacy is open to men and women in any profession or field of study who are over the age of 21 years. Strong preference will be given to applicants who will be under 36 years of age on 1st September 1993. Candidates must by that date have a degree, or an equivalent qualification conferred by a professional body, or an outstanding record of achievement in the creative arts, journalism or other career. In addition, candidates for an M.B.A. must have had substantial full-time post-graduate administrative experience.

The Commonwealth Fund focuses on health care, education systems, and issues affecting the quality of life in cities, therefore The Australian Selection Committee would wish to encourage candidates from these areas, providing they meet the overall criteria of exceptional ability and promise. The Committee will also aim to recommend outstanding young people from other fields of study or vocation.

Candidates must be citizens of Australia or have taken positive steps to achieve citizenship. They must not, between their 19th birthday and 1 September 1993, have spent more than six months in the United States.

The closing date for applications is 31 August 1992.

APPLICATION FORMS may be obtained by individual candidates on request by letter to the Australian Representative of The Commonwealth Fund: Mr R.D. Beale, C/-Department of Transport & Communications, GPO Box 594, Canberra, ACT 2601. Further information from: Professor John Gero, Department of Architectural and Design Science, University of Sydney NSW 2006.
Literacy education program expands its profile

After successfully marketing a literacy education program for teachers in the USA, the Language, Literacy and Learning Unit, through the Illawarra Technology Corporation, began to introduce the program into NSW this year.

The interest has been extremely favourable with one training session held in March and three more planned for later in the year across the state.

Interest has also been expressed from New Zealand and several South Pacific nations.

The Illawarra Technology Corporation has been kept so busy responding to requests for information that new staff have been employed.

The program, called Frameworks, was developed by Associate Professor Brian Cambourne and Ms Jan Turbill.

In the USA it is a co-operative venture between the Illawarra Technology Corporation and the Wayne Finger-Lakes Board of Cooperative Educational Services (BOCES) in New York State, USA.

This board represents a consortium of 30 school districts across the state. These districts had expressed strong interest in adopting an approach to literacy education which had been adopted in Australia in the mid '80s.

The approach—known as ‘whole language’ in the United States and ‘holistic or natural learning’ in Australia—is based on a philosophy and set of practices which are quite different from the predominant approaches to teaching literacy currently found in the USA.

Traditionally, the approach to literacy education has been to break the reading task down into sub skills. These skills are taught one at a time.

The top students have no difficulty in making the connections between these skills which add up to the ability to read.

But many average to poor students do not connect all these separate skills to see the ‘big picture’. The method developed at Wollongong starts with the ‘big picture’ first then the individual skills are taught. This approach enables students to see what they are aiming for.

Literacy educators in the USA began to look to Australia for information and guidance in how to help their teachers understand and implement this philosophy at the classroom level.

Three Australian educators well known for their research and publications in this field were approached to develop a staff development program and thus Frameworks was conceived.

Ms Turbill and Associate Professor Cambourne, in collaboration with Andrea Butler, an Australian educational consultant working in the USA, conceptualised and began to design Frameworks in 1989.

Frameworks is a multi-staged site based program designed to be run by a trained facilitator over a series of 5-8 two and a half hour sessions.

In 1990 the authors wrote the first stage of the Program. It was piloted the same year in the Consortia School Districts across New York state.

As a result of this trialing the first stage, ‘Frameworks: The Core Program for Grades 3-8’, was published and marketed by the Wayne Finger-Lakes BOCES across the USA in 1991.

1991 saw the training of 110 teachers to become district facilitators of Frameworks. Each of these facilitators returned to their school districts and trained approximately 2200 fellow teachers in the philosophy and implementation of ‘whole language’.

In 1992 these numbers have more than doubled with 300 facilitators from school districts and universities from 15 different states having been trained.

Two universities have also based specialist Masters Programs on Frameworks.

Additional stages to the program have been planned.

A module comprising eight sessions on the topic of ‘Assessment and Evaluation’ is being written for publication in early 1993.

Other stages planned are a core course for teachers of K-2 grades and other modules on the topics such as ‘Creating a Literature Based Classroom’ and ‘Reading and Writing in the Content Areas’.

A further development is the addition of a US co-author, Gail Langton to the team of Turbill, Cambourne and Butler.

In 1992 Frameworks is expected to revenue $US700,000 employing four full-time staff and several part-time staff.

It is both an exciting and rewarding enterprise which at its present rate of growth should become a very successful commercial enterprise into the '90s and beyond.
Workshops on tertiary teaching

In Spring Session the Faculty of Education, in co-operation with the Centre for Staff Development, will offer a special program for academic staff who wish to develop or refine their teaching skills.

Entitled Introduction to Tertiary Teaching, the program will deal with large and small group teaching methods, the preparation of media and materials, a range of alternative teaching strategies, student assessment and subject design.

These topics will be unified by several themes including social and multicultural issues, the principles of adult learning and the development of students' learning and learning skills.

The aim is to develop capable and reflective teachers and to refine existing skills for participating staff in order to maximise learning for students of the University.

While this program has been developed for inexperienced teachers or new staff to the University it is open to all staff.

The Faculty of Education is able to offer academic credit to staff who complete the program as part of a formal post-graduate award, but it is also available separately.

Consequently all staff are invited to enrol whether or not they seek academic credit for their work.

This work will include workshop attendance, on-the-job applications and practice, observation, assignments and readings. It will be organised around a regular weekly meeting time to be negotiated by the participating group.

Subject to approval by Academic Senate, the subject Introduction to Tertiary Teaching will contribute to a new course - the Graduate Certificate in Higher Education.

This certificate will be awarded to staff completing the Introduction to Tertiary Teaching subject and two other subjects from the offerings in the existing Graduate Diploma in Adult Education and Training.

Upon completion of the Certificate course staff who wish to do so may continue their studies towards the Graduate Diploma and/or higher degrees in Education.

Staff who are interested in this new course or who desire additional information should contact Dr Max Gillett, ext. 4277 or Associate Professor John Hedberg, ext.3310 in the Faculty of Education, or Dr John Panter ext. 4100, or Liz Ellis, ext. 4101, in the Centre for Staff Development.
What's On

Rowley, School of Creative Arts, University of Wollongong, tel. (042) 21 3991

- The 11th International Conference on Ground Control in Mining will be held at Northbeach Parkroyal from 7-10 July. It is organised by the University of Wollongong, the University of West Virginia and the Australian Institute of Mining Metallurgy. The keynote address will be given by Mr W Tattersall, Assistant to the Secretary of State for Safety and Health, USA.

- School of Creative Arts events include: 6-26 July: Hope Theatre The Rime of the Ancient Mariner - Ian McGrath

- The 22nd Conference of the Illawarra Group, Institution of Engineers, Australia, will be held at the University of Wollongong, Thursday, 9 July, 1992. Conference theme Total Quality Management - a Tool for Engineering Excellence. The keynote address will be given by Dr Peter Gibson, who has played a key role in the development of an innovative post-graduate program in TQM in the Department of Mechanical Engineering. Conference Patron in Commander Les Renford, Chairperson, Standards Committee QR/8 - Quality System. Enquiries Judy Gordon, IEAust Campus Office, tel. (042) 21 4086.

- The Illawarra Garden School is holding a function on Thursday 9 July in the Pentagon Lecture Theatre 1. Cost is $16 per person for the day. This includes morning tea, a two-course lunch in the dining hall, and four excellent speakers. The speakers are: Stephen Astill, Floral art demo; Harry Churchland, Camélia; Greg Hones, Gardening in pots; Robbie Engall - Citrus trees and roses. Members of the public will be most welcome. Enquiries, by 26 June, to Mrs Merle Moncreiff, tel. 287297.

- AIDAB is holding a seminar, Development import finance facility at the Illawarra Technology Corporation on 10 July. The seminar will be opened by the Hon John Kerin, Minister for Trade and Overseas Development. Enquiries: Anne Webb (042) 26 8800.

- Upcoming Illawarra Committee for Overseas Students events are: 25 July, Snowy Mountains; 19 September, Canberra; 11 October, Harbour Cruise and Sydney Aquarium; 5 December, Australia’s Wonderland. Tickets and details are available from the ICOS office in the Union Building next to the Careers and Appointments Service, Tuesday, Wednesday and Friday, 9.30am-2pm. Tel. (042) 21 3158 or ext. 3158.

- The Total Quality Management Institute and the Illawarra Quality Improvement Network are sponsoring a conference on 11-12 August at the Northbeach Parkroyal called Quality in the Community. This conference will provide a forum for the exchange of information amongst organisations practising or seeking to implement TQM methods. Speakers include Professor Michael Hough and Professor Lauchlan Chipman. For information contact TQMI tel. (02) 439 8817

- A special schools performance of Expans, which combines new music and dance theatre, will be held on 28 August, from 10.30am-12.30pm. This performance has been arranged for music and drama students to experience an exciting new combination of music and dance theatre/movement. There will be public performances of the concert in the evening at 8pm. Bookings: (042) 21 4214. Enquiries: (042) 21 3580

- Open Day: Sunday, 30 August.

- The 1992 Bridge Recital Series continues with multicultural folk fusion group Southen Crossings (20 September) as well as an appearance by the opera diva Amanda Thane (6 September). Tickets for the Sydney Shanghai String Quartet are $18 ($14 concession) or $50 for a family of four. Book with Margaret Sharrad, tel. 28 1843, or Bridge Theatre, tel. 29 6144.

- Australian Computer Conference on Information Systems hosted by the Department of Business Systems 5-8 October at the University of Wollongong. Enquiries to Gaye Herbert (042) 21 3958.


Stop Press

Incidents of thefts from cars, offices and the Library continue despite every effort by Security Staff. Please assist by being careful with your personal property.