



**MACQUARIE UNIVERSITY**

**AUSTRALIAN CENTRE FOR EDUCATIONAL STUDIES**

## **Submission to the Inquiry into Teacher Education**

### **Submission Structure**

This submission from the Australian Centre for Educational Studies (ACES) at Macquarie University comprises an introduction to the Teacher Education program at Macquarie, addressing its organisation and programs as well as the philosophy underpinning the Teacher Education Program and the development of the Macquarie model. There is a section indicating how the approach has changed in recent years.

The second part of this document provides commentary on each of the Terms of Reference based on the current operations at Macquarie and the experience of teacher educators in ACES.

### **Contact Details**

Professor Alan Rice  
Interim Dean  
Australian Centre for Educational Studies  
MACQUARIE UNIVERSITY NSW 2109

Tel: (02) 9850 9848  
Fax: (02) 9850 9891  
Email: alan.rice@mq.edu.au

29 April 2005

## INTRODUCTION

Set up in 1964 as a radical experiment, explicitly to serve industry, commerce and key sections of the community including education, Macquarie University is the only New South Wales institution apart from Sydney to be founded as a full, independent, research-based university. Encouraged from the start to be innovative and to question traditional practice, it was the successful pioneer of the group now known as the Innovative Research Universities Australia.

Macquarie's founding values of innovation, research, industry links, interdisciplinary, and flexible multi-mode access including distance education and cutting edge use of new technologies, are strongly evident – enhanced by a vital internationalisation and commercially astute entrepreneurship.

Enrolling its first undergraduates in 1967, Macquarie now has nearly 29,500 students and is approaching 100,000 graduates. The percentage of international students at Macquarie is the highest in Australia with many coming from Asian countries particularly China.

### AUSTRALIAN CENTRE FOR EDUCATIONAL STUDIES

The Australian Centre for Educational Studies (ACES) is comprised of the School of Education, the Institute of Early Childhood (IEC), the Macquarie University Special Education Centre (MUSEC) and the Institute of Higher Education Research and Development (IHERD).

ACES brings together Macquarie University's expertise in education across the lifespan. In each area ACES is an acknowledged leader in its field, nationally and internationally. It offers outstanding programs for undergraduate and postgraduate study spanning early childhood, school and higher education and gives particular attention to supporting the learning of those with special needs. Innovative programs also address educational leadership and technology-enhanced learning. The staff of ACES strives to build on their established history of leadership in educational studies by providing teaching and learning, research and scholarship and community outreach and partnerships that are of the highest standard.

The Macquarie ICT Innovations Centre on campus is a strategic partnership with the NSW Department of Education and Training, supported by industry partners which provide state-of-the-art equipment. It promotes innovation in public schools through the use of new technologies, working directly with teachers and students. The program is led and managed by senior staff appointed by both the Department and the University. In April 2005 Professor John Hedberg joined the team bringing his considerable expertise in technology to lead the research and professional development program of the ICT Centre in partnership with schools.

In addition, the Vincent Fairfax Family Foundation has sponsored a Chair linked with the Macquarie *Teachers for the Future* program, which is designed to sustain and enhance Macquarie University's eminence in teacher education. The focus will be on developing initiatives that strengthen alternative pathways into teaching, encourage mentoring of beginning teachers and their ongoing professional development. A new professor has been appointed from the University of Kansas, Wichita to lead the Macquarie *Teachers for the Future* Program and will take up the position in July 2005.

### Teacher Education

The **School of Education** is a founding faculty at Macquarie University and has made a major contribution to the education of primary and secondary school teachers through its undergraduate and postgraduate programs with over 350 students graduating from the undergraduate program in 2004.

At the core of its approach to teacher education is the concept of the scholar-teacher, one who is flexible, responsive to academic needs and confident to adapt to changing circumstances. Programs combine academic rigour with sound pedagogy. Students benefit from a university-wide program with integrated academic, educational and professional studies. The approach is developmental with continuous experience in a school working with a mentor teacher being used for the practicum. Introductory units within the School of Education raise major issues confronting contemporary Australian education set against an international background.

For undergraduates, a four-year double qualification for intending primary and secondary teachers leading to the award of a Bachelor degree together with a Diploma of Education is available. Graduates with a Bachelor degree containing an appropriate major are able to choose from three graduate programs: the Graduate Diploma in Education, the Bachelor of Education (Primary) and the Bachelor of Education (Secondary). Most graduates of these programs become primary or secondary school teachers, while others find employment in a variety of educational settings. The secondary Teacher Education Program is available only in the following five Key Learning Areas: English, Mathematics, Science, Human Society and Its Environment and Languages.

The School offers postgraduate research degrees ranging from Masters by Thesis to PhD and EdD designed to equip graduates for effective leadership in educational and research positions. A recent innovation has been the introduction of postgraduate programs in Educational Leadership offered at the Certificate, Diploma and Masters level in four specialisations.

The **Institute of Early Childhood** (IEC) is the major provider of early childhood education in NSW, offering courses at undergraduate and postgraduate level. The Institute has had a long history as an innovative provider of teacher education for early childhood teachers and relocated to Macquarie University in 1990. It specialises in the education of teachers of children aged birth-8 years in a range of children's services and schools. Students undertake a balance of professional and liberal studies and engage in field-based practicum experiences. Graduates may find employment in the first years of primary school.

The Bachelor of Education (Early Childhood Education) is the teaching qualification sought by those wishing to work in primary education. Typically, graduates are employed in long day care, preschool and the early years of school. The Institute also offers two Bachelor of Teaching (ECE) programs that prepare graduates to work as teachers and managers of prior to school services catering for children aged from birth to five years. One of these programs is open only to Indigenous students. The other is a work-based program for people currently employed in prior-to-school services who wish to upgrade their TAFE Diploma of Children's Services qualification.

As the 'Centre for Research and Teaching in Special Education', the **Macquarie University Special Education Centre** (MUSEC) places equal emphasis on providing quality postgraduate training in Special Education. MUSEC currently offers four Postgraduate Certificates in Special Education, a Postgraduate Diploma and a Master of Special Education by coursework study, in addition to higher research degrees at masters and doctoral level. The Diploma and Masters programs provide a recognised generalist teaching qualification in special education.

A non-categorical approach is adopted, focusing on adapting instruction to individual needs and a data driven approach to teaching. The programs adopt a scientist-practitioner model focusing on the identification and implementation of evidence-based practice. All courses of study are offered in internal and distance modes with a focus on online technologies. MUSEC has only limited input into undergraduate teaching, with a single 100-level unit being offered for the first time in 2005, and some input into the mandatory unit in special education offered by the School of Education.

**The Institute for Higher Education Research and Development (IHERD)** offers postgraduate research and coursework programs that focus on the nature and development of higher education *learning and teaching: e-learning; leadership, management and administration*. With its commitment to higher education research and development, IHERD aims to influence the development of higher education policy and practice within higher education sectors nationally and internationally.

## **Quality of Educational Services**

Evidence of the quality teaching within ACES is demonstrated by the awards received by staff for quality teaching and include over the past year awards to Joel Hurley, Christine Preston, Kerry-Ann O'Sullivan and Wilhelmina Van Rooy in the School of Education and Shirley Wyver and Ayshe Talay-Ongan in the IEC. ACES has been recognised for the excellence of its programs through its engagement in an international partnership concerned with improving the quality of English teachers employed in Malaysian Government schools.

Feedback about the satisfaction of students engaged in programs offered through ACES is used in reviewing teaching and unit organisation, content, assessment and support.

The Division is making an important contribution to educational research. Areas of research strength at ACES are:

- Pedagogy and Curriculum/Key Learning Areas particularly in Literacy, Mathematics and Science Education;
- Applications of ICT in education;
- Policy, leadership and professional practice in education;
- Individual, family and community influences in education;
- Special Education particularly Literacy and Behaviour;
- Early Childhood Education.

Priority in the past two years has been given to the development of programs in educational leadership, enhanced teaching and learning through technology, literacy, numeracy and science education and meeting student needs in gifted and talented education and special education. The appointment of two new professors in 2005 adds to our capacity to complement the expertise of Professor George Cooney who is internationally recognised for his leadership in assessment, for his outstanding contribution to the NSW Universities Admission Centre as Chair of the Technical Committee on Scaling, and for his advisory role to the NSW Board of Studies. In addition, Professor Kevin Wheldall is acknowledged for his leadership in literacy and behaviour with students experiencing difficulties in these areas.

Research in partnership with the education sectors has been extensive in recent years and includes the development, implementation and evaluation of the influential Count Me In Too Project in Mathematics. Macquarie has played a key role at each step in the development of this project and a staff member was funded to support schools and to report on the outcomes as well as on the pedagogical aspects of the project.

In addition ACES has been commissioned by school authorities to provide reports based on evidence based research and investigation. Examples include the reports on Selective Schools, Vocational Education and Training, Developments in the Management of Early Childhood Education in Australia with particular reference to NSW and an Evaluation of Pre-Schools within a school authority.

Also in partnership with the school sectors Macquarie University staff have been engaged in small scale projects such as in the contribution of Professor George Cooney and Associate Professor Pamela Coutts to Assessment and Reporting panels developing and examining items for the major statewide testing programs and who, in association with Dr Judith Dickson of Macquarie University, served on accreditation panels as nominees of the NSW Vice-Chancellors' Committee. Alan Rice assisted the Department in the development and implementation of the innovative Mentor Teacher Project to support beginning teachers and is

a member of the National Inquiry into the Teaching of Literacy. In early childhood the IEC has provided continuing policy and pedagogical advice to the Early Childhood Reference Group of the NSW Department of Education and Training and to prior to school providers. In Literacy there has been significant support to the NSW Department of Education and Training State Literacy Strategy and to the development of the curriculum framework for prior to school services by the NSW Department of Community Services.

Macquarie has provided support as critical friends in helping schools develop their practice. Through formal partnerships and ongoing relationships with schools, academic staff gain an appreciation of the realities of leading and managing schools and of teaching and learning in classrooms in NSW. The IEC has had a long standing arrangement to support the Kent Road Public School in the early years of schooling whilst other staff have acted as critical friends for literacy programs in schools, supporting the implementation of the Priority Schools Program.

In association with Noel Pearson, Director of the Cape York Institute for Policy and Leadership, Professor Kevin Wheldall and staff from MUSEC are preparing to engage in a program to strengthen the literacy outcomes of indigenous students in the remote community of Coen in North Queensland. A literacy program, MULTILIT has been running in a tutorial Centre for the Exodus Foundation in Ashfield for the past ten years. MUSEC has also successfully bid for cadetships in Special Education to address staffing needs in this area and has provided training for teachers transferring from the regular classroom to special education settings.

IHERD at Macquarie University has begun the first stage of a collaborative research and development project with Flinders University into academic leadership. Macquarie University in a project led by IEC has received more than \$2 million from the NSW Department of Community Services to continue a longitudinal study into the child care choices of Australian families.

Our commitment is to develop projects with the school sectors and schools in supporting our graduates in their first year of teaching and to promote the professional learning of teachers throughout their careers. Partnerships with the school sectors in key areas of teaching and learning will benefit both the University and the schools through improved preparation programs and quality professional development for the teaching service.

## **Philosophy of the Teacher Education Program**

The following section is contributed as an introduction to the Macquarie Teacher Education Program as initially designed to prepare school teachers K-12. It indicates its development and current approach. The statement is relevant to Terms of Reference 5 and 6.

Macquarie University has been committed to an academic, research-based approach to teacher education. Its approach was informed by four perspectives: liberal, emancipatory, progressive, and vocational.

- The liberal perspective of teacher preparation advocates a strong liberal education. The teacher is educated as a scholar and is involved in research activities throughout their program. Prospective teachers benefit from a broad-based university program and the development of scholarly virtues and habits. The graduate should be able to describe a coherent and well-informed theory of education and pedagogy.
- The progressive perspective emphasises individual development and the ethic of care. Study in educational and cognitive psychology; special education; and traditional, technical and cultural literacies are designed to provide a sound basis for effective curriculum planning and teaching. The Program is responsive to individual needs and students are encouraged to value student-centred learning in their practicum and teaching careers.

- The vocational perspective encourages a focus on classroom issues and the development of key instructional and classroom management competencies as well as knowledge of the legal and organisational features of schools and teaching.
- The emancipatory perspective is concerned with the advancement of a socially critical pedagogy aimed at the development of a just, tolerant, democratic and civil society. The focus in this perspective shifts from the individual as a learner to the individual as a member of the community. Whilst this underpinned the development of Macquarie's teacher education program, the four components continue to be important and comprise the basis of the current preparation program.

## **Development of the Macquarie Model**

At the core of Macquarie's approach to teacher education was the concept of the "scholar-teacher" and the role of the university sector in preparing such teachers. A consequence of the centrality of this concept was the introduction of the BADipEd pre-service program for both primary and secondary teachers in 1969.

This concept had its genesis in the writings of Cohen (1950), who saw the need for a new type of teacher; "one that would be more open, more flexible, freer, more responsive to academic needs, venturesome, open-minded, confident to adapt, capable of considering radical departures from accepted practice." (Mitchell, 1967).

The aim was to raise the status and the quality of the professional work and thus, gradually, the status and quality of teachers. Student teachers would acquire a broader view of themselves, of knowledge, of schooling and of society through wide-ranging general studies. "The intending teacher should do much of his [sic] work alongside people preparing for other professions" and, at the same time, be provided with an opportunity "to undertake studies in which he [sic] is interested without special regard to the strictly professional motive" (Cohen, 1950, p. 527).

The view of the scholar teacher is very different from the view prevailing at the time where teachers were seen as 'technicians' responsible for the delivery of prescribed curriculum content. Teacher education programs of the period, with a few notable exceptions, were relatively short and dominated by content and delivery-based skills, which did not promote thoughtful and reflective practice. This may help to explain why so many practicing classroom teachers speak so disparagingly of their own pre-service education. It may also help to explain why the notion of 'teaching as a profession' has not been embraced as extensively as it should be – both within the profession and in the broader community.

The notion of a scholar-teacher requires university-based teacher education. Recent reviews (eg Galton, 1999) of the move to more school based teacher education programs in England have highlighted the dangers of students being socialised into the existing school culture rather than becoming reflective practitioners who can integrate theory and practice.

## **Promotion of the Concept of Partnership**

Recent reviews of teacher education (eg NSW Ministerial Advisory Committee on Quality of Teaching, 1999) emphasise the concept of partnership between schools and universities, and the need for closer collaborations between the two. Partnership has been a key aspect of the Macquarie Teacher Education Program since its inception. Much of the background material about Macquarie's program, particularly with regard to partnership, is contained in a PhD thesis (Smedley, 1996).

Smedley (1996) traces the interest in partnership and shows that the concept has been prominent at two points in this century, during the sixties and in the period of the 90s. It traces a significant, but short-lived, interest in partnerships in the 1960s and documents the far stronger and more widely influential re-emergence of the partnership concept more recently. The

Macquarie University Teacher Education Program stands as an example of one program which emerged during the initial short-lived period of change and which has, since that time, continued to shape a particular form of partnership.

Based on the notion of the scholar-teacher and the theoretical perspectives listed above, the Macquarie model of teacher education was developed to incorporate 'best practice' as perceived by academics of the day, drawing upon a range of strategies conceived and trialled in other countries. In 1969 the program, which was developed through wide liaison with Macquarie academics, employing authorities, teacher unions and schools, provided Australia's first concurrent, integrated degree and diploma pattern for teacher education. Its distinctive features included:

- Teacher Education seen as a **university-wide program**, with integrated academic, educational and professional studies;
- a **concurrent structure** where students were simultaneously enrolled in a Bachelor of Arts degree and the Diploma of Education;
- **curriculum lecturers** appointed jointly to the Teacher Education Program and the School of the academic discipline; and
- a developmental model of the **practicum** that provided a continuous experience in one school, with selected, contracted and paid Master Teachers holding a major responsibility for the instruction, supervision and assessment of student teachers.

The concept of partnership underpinned the model, and not just one partnership but several overlapping partnerships:

- partnership between the different academic disciplines of the university through the co-operative planning;
- partnership between the academic and professional aspects of the program through the joint appointment of staff to the Teacher Education Program and to the School of the academic discipline (this was disbanded in 1992);
- partnership between the university and the major employer through the secondment of classroom teachers to provide recency of experience for the curriculum lecturers; and
- partnership between the students, curriculum lecturers and schools through the nature and organisation of the practicum.

Separately, each component stood as an innovation on the Australian scene. Combined, the various parts strengthened and enriched each other. It was their unique interaction which provided an opportunity for renewal in teacher education.

## **Recent Enhancements to the Teacher Education Program**

Lest it be thought, because this submission has addressed the philosophy of the Macquarie model as it was envisaged, that little has changed and the University has ignored current developments and issues in teaching and learning and the impact of technology. The University has retained what is essential in the original model because it considers that it is still "best practice" in some areas, especially the School Experience, now renamed Professional Experience, and its relationship with the remainder of the program. Modifications have been made to the Program to reflect current trends and changes in technology.

Information and Communications Technology (ICT) is an example. All graduates need to be able to teach the "new literacies". To this end, new units on ICT have been introduced in the undergraduate program and all curriculum units contain material on ICT. The objective is to ensure that graduates not only have demonstrated computer skills but also have a deep

understanding how newer technologies can be integrated into, and influence, the processes of teaching and learning in their subject areas. The strategy adopted is to use a mixture of self-instructional modules, formal teaching, and modelling by staff of what is expected through their own teaching. This has proved very successful.

ACES is moving rapidly to make many of its postgraduate units available by distance mode through the Internet. This has been a continuing process over the past five years and is largely completed. There have been major initiatives with regard to the undergraduate program. Most units have lectures digitally recorded and use the internet not only for lecture access but also to provide bulletin boards and additional resources. Given the importance of traditional modes of teaching within the current educational system, these initiatives augment rather than replace face-to-face teaching. They model best practice and ensure that Macquarie graduates are well aware of the potential of new technologies.

Staff have found that “online” courses do not necessarily reduce student contact. On the contrary, students tend to demand more immediate response through email and the bulletin board. This is an area that warrants further research. Several staff in ACES are engaged in research on the interaction between newer technologies and curriculum delivery. The results of their research are, and will be, integrated into the School’s program.

Other features of the Program that have been strengthened relate to staffing initiatives and partnerships that reflect our determination to maintain and strengthen the university-employer links. Professional development initiatives are embedded in the regular activities between schools and university staff have also been extended and there are strong links between academic staff and the NSW Board of Studies, Department of Education and Training and other agencies.

New graduate programs that are built on the Macquarie model have been introduced to cater for the increasing demand from persons changing careers. What the University has endeavoured to do is to maintain what has proved durable and demonstrated “best practice” and integrate into this initiatives to take account of changes in curriculum or assessment, the role of teachers, the school context, emerging technologies and community expectations.



## TERMS OF REFERENCE (ToR)

The Macquarie University submission from this point focuses on each of the ToRs for the Inquiry into Teacher Education.

### Terms of Reference 1

*Examine and assess the criteria for selecting students for teacher training*

There are a number of avenues by which applicants may enter Macquarie University. While the main criterion for school leavers is a high university-entrance score (with a UAI above 80 for all teaching programs), there are many other pathways. This is particularly important for mature age applicants seeking a career change. Demand has increased dramatically in recent years for Graduate-entry programs in most teaching areas.

Applicants may receive offers through one of the following schemes:

- school leaver entry with the appropriate UAI;
- Jubilee / Direct Entry Distance Education (DEDE) schemes for mature age students aged 21 years or over who have not had the opportunity to study previously. Preference is given to applicants who do not have the necessary academic qualifications for entry via a traditional route. Jubilee students study on campus, while DEDE students complete their program via external study. The DEDE program is only available for Early Childhood programs: for primary and secondary programs, students must be on campus for approximately half their studies;
- as a fee-paying Non Award student with entry into individual units rather than a program of study, with the ability to transfer into the relevant degree program upon completion of 12 credit points with a grade point average of at least 2;
- open entry for Aboriginal and Torres Strait Islander students to the Bachelor of Teaching (Early Childhood Services) for Indigenous students;
- admission with advanced standing for holders of appropriate TAFE qualifications, including entry to a work-based Bachelor of Teaching (birth to school age);
- graduate entry from appropriate disciplines to enter end-on Graduate Diploma programs to obtain specialist early childhood teaching qualifications;
- Graduate entry into the BEd(primary) where students are selected on the basis of background in appropriate discipline, a personal statement outlining their reasons for teaching and their related work/life experience as well as their overall GPA;
- Graduate entry into the Secondary GDip Ed (selected as the previous program, but with an additional interview).

Whilst there are other criteria than entry-scores that should be considered in selecting candidates for teaching, there are practical difficulties in implementing the required processes. Our approach following entry to the program is to engage students in processes that provide evidence of performance on these criteria. For example, the professional conduct variable is assessed in the practicum, providing important information about the capacity of the student to relate to students and to staff and to contribute to school organisation. The nature of interactions between intending teachers, school staff and academic advisers through the Macquarie practicum is described in Terms of Reference 8.

## **Terms of Reference 2**

*Examine the extent to which teacher training courses can attract high quality students, including students from diverse backgrounds and experiences.*

Entry via the traditional school-leaver route has become increasingly competitive. In 2005, a minimum UAI of 82 was required, reflecting the high demand for places in degrees available through ACES. Most students admitted on the basis of their UAI had a score significantly higher than 82. The UAI in education is comparable to those required for entry into a wide range of Macquarie University programs and was the highest UAI in education among the NSW universities.

While this enhances the status of the program, it precludes entry to many capable school leavers with lower UAIs who have a keen interest in teaching and would make good teachers. Many students in this category enrol as fee-paying Non-Award students in their first semester of study. In 2005, the number of Non-Award students enrolled in several first year core units is almost equal to the number of students who gained entry via UAC on the basis of their UAI. However, as outlined above, there are a number of pathways into teaching at Macquarie and there is considerable diversity in some programs. In particular, the GDipEd for secondary teachers attracts applicants from a wide range of occupations, ages and ethnic backgrounds.

An area in which Macquarie did not fill its available places was in the BSc DipEd. This reflected a worrying shortfall in programs in mathematics and science education across the country and not just at Macquarie. It applies to science programs generally and has resulted in the University undertaking research into the reasons for science being undervalued by school leavers as a possible career option. In order to maintain the quality of its programs, the University did not lower entry scores for any programs below 70.

## **Terms of Reference 3**

*Examine attrition rates from teaching courses and reasons for that attrition.*

In 2005 there are 1863 students enrolled in all undergraduate programs in ACES. The two largest of the 12 programs are the BEd (ECE) with 719 enrolments and the BA Dip Ed with 450. Attrition rates from teacher education courses are not high in comparison with other programs. The withdrawal from Dip Ed programs is insignificant. In 2004, the number of graduate teachers in the School of Education was 210 secondary and 150 primary whilst the IEC had 150 graduates.

Attrition rates for courses through the IEC to date for the first year core units offered in Semester One, 2005 have averaged 11%. For second year core units, the attrition rate has been 8.8%, dropping to 4.8% in third year to 2.9% in fourth year. In the past, informal exit interviews with students have highlighted diverse reasons for students discontinuing their studies, including a change in career interest, financial stress, personal and family circumstances and difficulty in managing work-study demands. These reasons are consistent with the extensive research literature about reasons for discontinuing higher education study.

## **Terms of Reference 4**

*Examine and assess the criteria for selecting and rewarding education faculty members.*

Staff have the same opportunities in ACES as in other Divisions at Macquarie University to benefit from provisions for promotion and to undertake outside study programs.

For continuing appointment at Level B (lecturer) and above, a PhD *and* relevant professional experience, generally but not always as a teacher, is required. Staff appointed at higher levels tend to be more established academics with substantial University teaching and research experience, but less recent professional experiences in schools or prior-to-school services. Opportunities for continuing appointment at Level A (Associate Lecturer) exist for practitioners without PhDs, but this is not a popular career path as Level A salary scales are substantially below teachers' salaries.

Promotion opportunities exist for staff who demonstrate a commitment to and strengths in teaching and research, and who contribute to the University, the profession and to the community *and* who are able to work the long hours needed to successfully manage all three areas of responsibility. At Macquarie University it is possible to gain promotion to all levels up to and including Level D (Associate Professor) on the basis of an emphasis and excellence in teaching with a lesser emphasis on research as well as the more traditional route through research excellence. Academic salary levels, across all ranks tend to be lower than salary levels for (school) teachers with equivalent experience and levels of responsibility, which can be a disincentive for teachers considering a career move to academia.

In theory, staff are entitled to apply for two periods of six months outside study leave every seven years to undertake sustained research. In practice, Departmental budget constraints and staffing pressures can constrain opportunities to take study leave.

Macquarie has continued to have a balance of continuing and contract/sessional staff, thus maintaining a strong connection with the profession. Contract/sessional and casual staff provide recency of experience to ensure currency in the program while continuing staff provide coordination, integration and continuity in other areas of the program.

While contract appointments enhance the quality of the pre-service teacher education program, there are perceived disadvantages for the University Department. Because many of these staff will be enrolling in postgraduate study they cannot contribute to the research output of the Department including the supervision of research students. This has financial implications for the University Department. Despite this, ACES supports the practice of a balance of short-term appointments because of the value the staff in these positions bring to the program.

Macquarie provides recognition at its graduation ceremonies for staff acknowledged by their colleagues and students as being outstanding teachers. Those who have been more recently recognised are listed in the introduction. In addition there are a number of grant programs including the new staff grants scheme that facilitate the research work of Macquarie staff.

## **Terms of Reference 5**

*Examine the educational philosophy underpinning the teacher training courses (including the teaching methods used, course structure and materials, and methods of assessment and evaluation) and assess the extent to which it is informed by research.*

The introduction to this submission has provided information about the programs and the development of the philosophy that underpin teacher education at Macquarie. The programs are designed to provide intending teachers with the required knowledge and skills necessary for their work as a teacher, an appreciation of the ethics and behaviours required of a professional and an understanding of the singularly important role of education to the community and the nation. This underlines the vital nature of the content, pedagogy and professional partnerships that comprise the teacher education program. The practicum provides an opportunity to engage in pedagogical practice that operationalises theory gained in lectures and seminars, to demonstrate the capacity for high quality relationships with students and teaching colleagues and reveal personal commitment to the responsibilities of the profession.

Integrated into the content of the program are issues such as literacy, assessment and the use of ICT as they are seen as integral parts of teaching and learning. The Macquarie program has been based upon an essential set of understandings, skills values and attitudes that students need to acquire during their period of training. These are being modified to conform with the Graduate Teacher stage of the Professional Teaching Standards of the NSW Institute of Teachers.

The following statement from the School of Education documentation is included because of the detail it provides about the teaching of the compulsory Teacher Education Program (TEP) Professional Curriculum Units which are delivered to link theory and practice in workshop settings.

TEP curriculum units, offered only at 200- and 400-level, provide the curriculum and methodology requirements for any Primary and Secondary teaching qualification offered by Macquarie University through the School of Education. It is these units which are necessary both for completion of the 'DipEd' or associated teaching qualifications at Macquarie as specified by the degree Rules (a minimum of 12 TEP credit points) and for professional accreditation. There are two types of TEP units: curriculum units focusing on teaching and learning strategies as applied both generically and to curriculum content and units which have a large school experience component.

The curriculum units use practical, skills-based workshop teaching, concerned with the understanding of principles of curriculum, assessment and instruction and their application to the current syllabus documents. The classroom teaching skills are modelled by lecturers, then trialled, practised and refined by students in peer groups and workshops. The 400-level units in particular are frequently taught by classroom teachers on a casual basis, or by staff appointed to Macquarie on two-year contracts from teaching positions. Over the past few years, the School of Education has modified the teaching and assessment of these units as far as possible. A limited number of large group sessions and lectures have been incorporated where they would not compromise the quality of the skills-based methodology instruction, and group sizes have increased from the traditional 12-15 of the late 1980s to 20-30.

All three of the IEC's initial teacher education programs are underpinned by a strong commitment to research-informed and child and family-focused practice. Students are expected to demonstrate a commitment to:

- recognising and building on the strengths, interests and needs of individual children within a group learning context;
- working respectfully and effectively with children and families from diverse cultural, social and linguistic backgrounds groups of learners;
- critiquing research-based evidence;
- critically reflecting on their practice as a basis for ongoing professional development.

The Institute's programs are quite tightly prescribed, with relatively few options concerning choice of units available to students, apart from the final year of the BEd and the requirement that all BEd students undertake at least 12 credit points of liberal studies from anywhere across the University. The relatively prescriptive nature of the program reflects the need to prepare students to work effectively in the prior-to- school sector as well as the school sector and to equip them to meet the particular demands of each.

To counter the students' relative lack of choice of units they undertake in their program, the Institute has a policy of requiring that wherever possible, each unit offers students assessment options that enable them to focus on the age groups / sectors in which they have a particular interest. This means, for example, that students who have a strong interest in teaching in schools are able to tailor many assessment tasks to focus on issues as they apply to school contexts. Similarly, students who wish to specialise in working with much younger children can do so informally through their choice of assignment options. All students must complete sequences of units in child development, families in social contexts, curriculum, reflective practice (with an embedded practicum), and management of children's services, as well as liberal studies.

Students enrolled in the BEd may choose to study in either internal or external mode. Almost all units require students studying externally to attend compulsory on-campus sessions, usually held on weekends or during school holidays / university breaks. Students make good

use of the flexibility to move freely between any combination of internal / external study mode on a semester-by-semester basis. Students nearing the end of their program increasingly take the opportunity to combine part-time internal or external study with full time or part-time teaching jobs. In effect, these students are taking the opportunity provided by program flexibility to create their own transition to teaching pathways

### **Terms of Reference 6**

*Examine the interaction and relationships between teacher training courses and other university faculty disciplines.*

Within the BADipEd programs there is considerable interaction with other faculties. Intending secondary teachers complete all their discipline studies, approximately 75 per cent of their program, outside the School of Education taught by the discipline experts. There is regular contact between the responsible curriculum lecturer in ACES and staff in other departments to determine the most appropriate university studies suitable as preparation for teaching.

Intending primary teachers enrolled in the BADipEd complete up to half of their program outside the School of Education with several departments (e.g. Linguistics and Mathematics) offering units designed especially with intending teachers in mind. Similarly Education units are accessed by students with other discipline specializations.

The importance of partnerships to our programs was noted in the introduction. Other University disciplines are involved in the teacher education program offered at Macquarie. The importance of inter-disciplinary preparation of teachers is acknowledged through attention given to allied health services and to the role of the school and teaching profession in community development. There is also collaboration with the Information and Communication Sciences Division in promoting the use of technology in classrooms. The attention given to these areas has contributed to raising the status of the profession and of the faculty within the University.

As noted previously, liberal studies offered through the IEC allow students to complement their core professional studies by taking four units from anywhere within the University. These units provide the opportunity for students to develop their skills in critical enquiry and to acquire broader understanding of various traditions of learning.

Of note is that the Institute's central focus on the early childhood years enables it to make a substantial contribution to University-wide interdisciplinary initiatives. The Institute offers liberal studies units which attract students from other Departments within the University. Many of these students are enrolled in the interdisciplinary Bachelor of Creative Arts. The popularity of these units with students from other Departments is evident in Table 1.

Table 1: Students from other Departments enrolled in Institute units

<i>Liberal Studies Units offered by the Institute</i>	<i>% of students enrolled in these units from elsewhere in the University (2005)</i>
ECHL 111 Elements of Drama (2004)	58%
ECHL 112 Visual Arts: Foundation Studies	22%
ECHL 113 Children and Televisual Literacy	35%
ECHL 115 Music 1: Foundation Studies	20%
ECHL211 Genres of Theatre	13%
ECHL213 Images of Childhood (2004)	12%
ECHL 311 Performance: Theory and Practice	100%

## Terms of Reference 7

Examine the preparation of primary and secondary teaching graduates to:

All of the following areas perhaps with the exception of Teach vocational education courses receive planned attention through both theory and practice during the course of teacher preparation.

### 1. Teach literacy and numeracy

#### Literacy

Macquarie takes a research based approach to the teaching of reading and writing and graduates gain broad understanding of literacy and language acquisition (from birth and throughout schooling). There is special attention given to early literacy and to understanding the diversity of children's experiences prior to school entry. The following section contains detailed information about the courses and approach at Macquarie where literacy is an area of strength.

Students encounter research that demonstrates that explicit and systematic instruction as well as learning strategy instruction (ability to work with text in different ways to achieve meaning) are necessary components of learning to read. Macquarie courses have included research on the importance of phonics teaching at least since the mid 1980s (eg Stanovich, Chall).

In identifying and addressing the needs of students experiencing difficulties with literacy, Macquarie students focus on two basic processes as well as on a range of relevant strategies available to students through which they are learnt in the classroom:

- learning to decipher print (decoding, analogy, prediction and automaticity) with recognition of the importance of the explicit and systematic teaching of phonological and phonemic awareness as well as phonics;
- comprehending the meaning of print (facilitating, teaching, assessing and extending comprehension) with recognition of the importance of the explicit and systematic teaching of cognitive and metacognitive strategies through listening comprehension).

Our graduates are encouraged to teach literacy skills in an explicit and systematic way. They monitor their students' literacy achievements and plan for continuity in the literacy development of each student. They develop strategies to support student's learning when difficulties in learning are identified.

They appreciate the importance of learning partnerships with parents and caregivers and work respectfully and effectively with children and families from diverse cultural, social and linguistic backgrounds groups of learners.

Graduates gain knowledge of children's and adolescent's literature, engaging students in reading for meaning and enjoyment. As caring practitioners they come to appreciate the importance of critical reflection on their practice as a basis for addressing the literacy needs of their students and for their own ongoing professional development.

Within the School of Education, there is one compulsory theoretical unit related to the teaching of reading/literacy that all intending primary teachers complete. In addition, there are several optional units (EDUC343, EDUC341) related to the teaching of reading that students may select. Over 80% of the primary students choose at least one of these additional units in their electives.

The compulsory unit, *EDUC260 Language, Literacy and Learning*, provides the theoretical background to literacy. All intending primary teachers, as well as all intending Secondary English or ESL teachers, are required to complete this unit. Others choose it as an elective. It

takes an evidence-based approach to reading and writing whilst the research on the importance of phonics has been included at least since the mid 1980s (eg Stanovich, Chall). At present, there are five lectures devoted to phonics as well as three tutorials. The Unit Objectives and Content is attached.

One optional unit is *EDUC341 Learning and Behaviour Problems* focuses on the early years of reading. Macquarie students undertake a range of experiences related to reading that are designed to promote their knowledge of reading acquisition so that they can understand the reading process and thus develop effective and efficient reading programs for students experiencing difficulty in learning to read.

In addition to the theoretical unit EDUC260, students complete a sequence of four primary methodology units across two years (TEP290, TEP291, TEP492, TEP493). The structure of units involves a lecture strand related to each of the Key Learning Areas (KLAs) where policies and practices are reviewed. Workshops for the various KLAs are taken across the two years. The English K-6 strand introduces reading and the management of the classroom for literacy activities. An example of activities in which students are engaged are as follows:

- Prerequisite reading skills;
- Sequence for introducing, consolidating and writing sounds;
- Developing sound and sight word knowledge;
- Strategies for blending sounds into words;
- Modelled, guided and independent reading.

As a result of these activities, students will:

- Plan a unit of work;
- Use running records to assess reading;
- Learn about planning and organising guided reading groups;
- Plan a literacy program (short-term and long-term);
- Learn about teaching grammar, comprehension, research skills and spelling.

In addition to the above there is a TEP optional unit that approximately 20 students select each year, *TEP445 Teaching Students with Special Needs* that focuses on students with literacy or behaviour problems in mainstream classes. There is also the opportunity of an additional 10 days' Professional Experience associated with this unit.

To provide additional support for students in the improvement of communication skills, the School of Education has developed the Writing Gateway, an innovative program available to all students, making good use of modern technology.

BEd (ECE) students must complete a core literacy unit, *ECH 214 Young Children's Language, Literature and Literacy*. Most students who intend to teach in the first years of school also take the optional unit *ECH432 Early Childhood Developmental Literacy*.

In addition, there is an integrated focus on young children's literacy learning throughout several core units. For example, *ECH 113 Curriculum Play in Early Childhood* emphasises the playful use of language as a means of developing phonemic awareness, while in all five core *Reflective Practice* units, students are required to implement literacy experiences for young children aged from birth to 8 years in a range of settings, including the first years of school.

The two designated specialised literacy units:

- are taught by teams that involve a mix of University-based academics who have specialist expertise in language and literacy, and current or recent classroom practitioners and / or literacy consultants to ensure an appropriate mix of academic rigour, currency and practical orientation;

- emphasise the integrated nature of reading and writing development (e.g., through writing, many children become acutely aware of letters and words; this awareness provides a sound basis for the development of phonics-related skills);
- stress that literacy must be taught in a way that enables children to see reading and writing as purposeful and meaningful activities that are central to everyday life;
- emphasise the need for children to develop a strong systematic knowledge of literacy conventions and a richly stocked tool kit of literacy tools and strategies, including decoding, and comprehension skills;
- equip students with a diverse range of literacy teaching strategies, including explicit instruction, modelled and guided reading, and observation and assessment techniques;
- recognise the importance of fostering multiple literacies (including visual, technological, and critical literacy);
- draw closely on NSW Literacy Curriculum Documents issued by the NSW Board of Studies, the Department of Education and Training, and the Department of Community Services, as well as a range of equivalent documents developed in other States (e.g., the *First Steps* series developed by the Education Department of WA);
- recommend the use of authentic literacy texts with young children (e.g., quality children's literature; shopping lists and other functional literacy texts) to enable children to see a real life purpose in reading and writing;
- scaffold students' own continuing literacy development;
- require students to read widely and critically from the research literature, to identify implications for practice, and to follow through these implications in their teaching. Research journals regularly consulted by students include: *Australian Journal of Language and Literacy*, *Journal of Early Childhood Literacy*, *The Reading Teacher*, *Language Arts*, *Journal of Research in Reading*, *Reading Research Quarterly*.

While the two designated literacy units share many common features, each has a different focus, as outlined briefly below.

#### *ECH 214 Young Children's Language, Literature and Literacy*

This unit is undertaken in the first semester of the second year of the program. Students enrolled in internal mode attend classes for an average of 4.5 hours per week for 13 weeks. In addition, they have a minimum of five two-hour visits to a Year 1 or Year 2 classroom. During these field visits they are required to prepare, teach and evaluate small group reading lessons. A similar program requiring compulsory on campus sessions is offered externally.

Students develop an understanding of the processes involved in reading and learn to identify early reading behaviours, children's understandings about reading, and how adults can foster these. They also learn about the importance of environments in promoting interest and competency in reading and writing; how to create such environments; how to plan and sequence literacy lessons; how to evaluate reading schemes; and how to identify children with reading and other literacy-related difficulties.

#### *ECH432 Early Childhood Developmental Literacy*

This one semester unit is undertaken in the third or fourth year of the program. Students attend classes for three hours per week for 13 weeks or the equivalent in compulsory on campus sessions for students studying externally. The unit focuses on identifying phases of reading and writing development; evaluating children's progress in literacy; programming for individual children's literacy development within the group context of the classroom; and implementing reading programs for children from diverse backgrounds. Students undertake a detailed,



semester long case study of a child's literacy development, and plan and implement an individualised intervention program for that child.

## **Numeracy**

As with literacy, students in the primary and early childhood programs are required to complete a core unit on Mathematics. In the School of Education, this unit is EDUC 258. The great majority of students also complete a mathematics unit offered by the University (MATH106). There are complementary courses available to supplement the basic courses whilst the syllabus for Mathematics K-6 is a topic that is workshopped in the Teacher Education Program.

Students enrolled in the BEd (ECE) must complete a core unit with a substantial numeracy component, *ECH 215 Young Children's Mathematics, Science and Technology*. Most students who intend to teach in the first years of school also take the optional unit *ECH413 Early Childhood Mathematics, Science and Technology*. In addition, there is an integrated focus on young children's literacy learning throughout several core units.

Students review current research on early numeracy. They become familiar with key aspects of numeracy such as categorising, estimating, counting, patterning, data exploration, etc. Students are introduced to the NSW Department of Education and Training professional development project in numeracy – *Count Me In Too*. They gain experience in administering the SENA, they become familiar with the Learning Framework and they plan appropriate teaching activities. They become familiar with the NSW Mathematics K-6 Syllabus (2002) and plan appropriate experiences (a variety of applications of mathematics to real world problems and contexts) that will develop and enhance numeracy skills.

Students who select the optional 4<sup>th</sup> year unit look at the issue of numeracy in greater depth and continue to review research in this area. They take a closer look at the *Count Me In Too* package as well as the *Count Me In Too Indigenous* package. They plan an integrated unit of work that aims to develop children's numeracy skills. Students also look at the role of parents in developing numeracy and the partnership between home and school.

## **2. teach vocational education courses**

Macquarie does not prepare teachers in the Technological and Applied Studies area but units in the Secondary develop the awareness of students to the breadth of the school curriculum and to the links between school and work. The units address the global, social and policy issues in vocational education and the contribution of education to the life of individuals, families and the nation. Students consider issues relating to governance, organisation and program delivery in vocational education. A specialisation of the Masters Programs is Education and Work is available to extend the understandings of those individuals working in the post-secondary area, to develop their knowledge and skills in leadership and management within the sector.

## **3. effectively manage classrooms**

Classroom management is, and has always been, a major preoccupation of most beginning teachers. Teacher education programs have responded by developing units of study focusing on behavioural management. Whether this is the most effective approach is open to debate. It has been our experience that, while these units provide an excellent foundation, the skills of classroom management need to be developed and reinforced by a more integrated approach.

The School of Education has developed an approach that seeks to address the issue of effective classroom management within both specialised units but predominantly within the context of methodology-based units. A recent appointment has been made in the Classroom

Management area, and the lecturer has oversight of the content delivered throughout the School. There is an introduction to the issues in the early foundation and methodology units but the emphasis remains on the curriculum units delivered in association with professional experience. In many cases these methodology-based units are taught by practicing classroom teachers or academics with recent classroom experience. Their ability to articulate the issues involved in classroom management is strengthened by the immediacy of their experience.

The practicum also provides an opportunity for students to hone their management skills in a classroom setting. Ultimately, however, it is through experience that teachers develop their expertise in this important aspect of their professional practice.

In addition to acquiring the strategies to manage the classroom effectively student teachers need to develop an understanding of the social context in which schools operate. They need to appreciate the socioeconomic impacts of rapid economic change – economic restructuring and global economic and cultural integration. They also need to appreciate the spatial ramifications of these changes and how they impact on specific communities.

Family unemployment, the casualisation of the workforce, falling wages and cuts to welfare and public services have led to rising poverty and the emergence of an underclass. Those affected tend to live in neighbourhoods with the least expensive housing, often on the outer edge of our large cities. The concentration of the economically and socially disadvantaged into particular neighbourhoods frequently results in those areas becoming associated with a range of entrenched social problems. The schools serving these communities often bear the brunt of these problems. Many young people feel alienated and disaffected and these attitudes are then reflected in their behaviour and attitude to learning.

An understanding of the social context in which schools operate has the capacity to equip beginning teachers to deal with the management and welfare issues they will encounter.

Students in the IEC program acquire skills in effective classroom management and in establishing a positive classroom climate as they progress through their program, particularly in the sequence of Reflective Practice units in the practicum is embedded. The importance of developing respectful relationships with children is emphasised at all times. Students are encouraged to develop an awareness of their own body language, tone of voice and facial expressions. They are also expected to model appropriate social courtesies, to use encouragement as opposed to praise, and to assist children develop skills in conflict resolution. The emphasis is on assisting children to develop social and emotional competence and guiding children in positive ways that assist them to learn to direct and take responsibility for their actions. This approach is in stark contrast to behaviourist approaches that aims to direct and control children's behaviour through rewards and punishments.

#### **4. successfully use information technology**

Again, the approach is a combination of integration of skills and techniques across the programs together with several specialised units on technology and its applications. Students make substantial use of information and communication technology in several core units. For example, the first year core unit *ECH 120 Early Childhood Teachers as Researchers* is a fully online unit, which is presented in the traditional mode as well, for the express purposes of providing experiences in ICT that students will be able to apply to other learning contexts. Students' assessments in the unit include building discussions and narratives on WebCT communication platforms. Additionally, they receive instruction in the use of the electronic databases, directories and library access, and Web searches through online modules, and apply these skills to their major assignment. The unit also encourages students to use digital imaging and PowerPoint in their group presentations.

In the core second year *ECH 215 Young Children's Mathematics, Science and Technology* students explore the use of technology in early childhood and current research in this area. They are introduced to various forms of technology including calculators, digital cameras,

Smartboards, robotics and computers. In relation to information computer technology, students become familiar with various search engines, a variety of educational software packages such as Kid Pix and Kidspiration as well as web based games and educational sites. Students consider safety precautions when using computers and the internet with young children. They gain experience in planning integrated units of work that incorporate technology. They are introduced to child-initiated projects that integrate across the curriculum and utilise information technology.

Students who select the optional 4<sup>th</sup> year unit *ECH413 Early Childhood Mathematics, Science and Technology* continue to explore various software programs and sites and gain more experience in appraising them. They are introduced to the Macquarie ICT Innovations Centre. They are introduced to Electronic Portfolios, the design of online quizzes and gain further experience in planning units of work that integrate information computer technology.

Most if not all units in the Institute's preservice programs involve student participation in some form of ICT, typically through online learning components and / or the use of electronic data bases. A similar approach is offered in the School of Education. Graduates of the pre-service teacher education program are required to have a high level of computer proficiency and understanding of the role of ICT in the teaching and learning process.

Students achieve these competencies through a mixture of Individual Learning Modules, specific units on computer skills and Information technology and their curriculum and methodology units. The School of Education has a well-equipped Instructional Technology (TEPIT) Centre that provides a multi-platform resource centre with a wide range of software across all Key Learning Areas K-12. Students are encouraged to use the centre to gain experience on different platforms, evaluate different software and prepare teaching resources.

All students are required to complete Individual Learning Modules that address the necessary basic competencies required of a professional. Competencies relating to multi-media and interactive presentations, pedagogical applications of technology, software evaluation and ethical considerations are achieved through curriculum and methodology units. Students are required to demonstrate the competencies through designated assignments. In addition, the School of Education offers *EDUC 261 Information and Communication Technology in Education* and *TEP 284 Computers in Schools* (designed for Primary teachers).

## **5. deal with bullying and disruptive students and dysfunctional families**

The topics of bullying and dysfunctional families are addressed across a number of units within the undergraduate program especially in the methodology units that address classroom management.

A core third year unit, *Families and Communities in a Culturally Diverse Society* deals with the structure and processes involved in family relationship; with intergenerational links and cross-cultural influences, and charts important patterns in relationships across the life cycle. Students examine key theoretical perspectives relevant to psychological development within families, family function, dynamics and systems. Students are provided with information on differences in family organisation, functioning and outcome as determined by ethnic background and context. Students enrolled in this unit develop a clear understanding of how deprivation and poverty influence families and explore the causes and consequences of child maltreatment and family violence.

Topics related to peer relationships, bullying and behavioural maladjustment feature prominently in the fourth year unit, within IEC, *Advanced Studies in Child Development: Implications for Practice*. Students explore the causes and consequences of bullying, identify individual, familial and contextual risk factors; examine key research approaches and identify interventions designed to reduce bullying in preschool and schools. A 300-level unit in the School of Education addresses similar issues within a K-12 age range.

## **6. deal with children with special needs and/or disabilities**

In both institutions there is a strong focus on teaching students with special needs. There is a compulsory unit in each department (TEP246 for the School of Education, ECH320 for IEC) that includes the required competencies. In addition, more specialised units are available as options (TEP445, EDUC341).

Students in the IEC undertake a core unit at 300 (3<sup>rd</sup> year) level *ECH 320 Developmental Difference and Disability*, which is dedicated to atypical development, various developmental disabilities, and early childhood professionals' preparedness to serve in early intervention teams as well as planning for and teaching children in inclusive settings. In addition to a fairly extensive content acquisition in developmental disabilities, students undertake a lengthy investigation on a child with a disability, by child observations, by communications with teachers and other professionals, and by conducting a family interview, at the end of which they develop individual education plans with goals and objectives for the children. Inclusive education and individualised planning thus becomes a significant part of their teaching portfolio.

## **7. achieve accreditation**

Macquarie University endorses the work of the NSW Institute of Teachers in establishing benchmarks for the achievements of our graduates. Benchmarks have been guiding our progress as indicated earlier in this report but having a standardised set is a measure that will allow staff to receive improved feedback on the performance of our graduates in key areas of importance.

We would like to add a note of caution. There is a need to avoid reducing teaching to a checklist of competency-based standards. Effective teaching is, by very nature, difficult to define. It is worth recalling Orstein's (1990) assertion that:

... teacher competency and teacher effectiveness models tend to overlook the friendly, warm, and democratic teacher; the creative teacher who bubbles with energy and enthusiasm; the philosophical teacher who encourages students to play with ideas and concepts; and the problem solving teacher who requires that students think out the answer. In the new researchers' desire to identify and prescribe behaviours that are measurable and quantifiable, they overlook the emotional, qualitative, and interpretative descriptions of classrooms...

The new models ... seem to miss moral and ethical outcomes, as well as social, personal, and self-actualising factors related to learning and life... these models ignore the learner's imagination, fantasy, and intuitive thinking – their dreams, hopes, and aspirations, and how teachers impact on these is hard to define but are very important aspects of the student's life...

The position on teacher registration does not negate the need for pre-service teacher education programs to be accredited and there is a strong argument that programs should be reviewed on a regular basis. Processes at Macquarie enable evaluation to occur both for the program as a whole and of the units that comprise the program.

## **8. deal with senior staff, fellow teachers, school boards, education authorities, parents, community groups and other related government departments.**

This area is very significant throughout the primary and secondary programs and is a particular focus of the practicum. A number of students leave the program because they are unable to meet the required adequacy for professional relationships. The area is also covered in course materials as evidenced in the following report from the IEC.

The three core units focusing on management of early childhood settings at the Institute of Early Childhood provide an integrated approach to working with professionals, parents, community organisations and government departments. The integrated spiral builds core concepts consisting of structural aspects of organisations; group dynamics with organisations; and external factors, such as government policy, which impinge upon early childhood teachers. Each unit in the Management strand introduces core concepts and they are built upon and revisited during the three semesters. The particular focus changes as the students progress through the spiral.

*ECH315 Early Childhood Management 1*, the introductory unit, provides students with the structural information needed for effective management when working as early childhood teachers. In particular, it examines the areas of internal and external accountability for which teachers are often responsible. This introduces students to their role as a professional, including awareness of the NSW Institute of Teachers and induction programs available through the Department of Education and Training.

*ECH316 Early Childhood Management 2* examines the interpersonal and group dynamics of effective management. It focuses on fostering collaboration and building and leading teams. This includes engagement with policy development, administration and time management. The third core unit *ECH425 Early Childhood Management 3* explores the interplay between the micro system of educational organisations and the macro systems of government and society with a particular emphasis on higher level negotiation and strategic planning skills. Modules in this unit, which focus on topics such as conflict resolution and decision making, include understanding the importance of consultation with families and communities. Achieving accreditation as a teacher is revisited in this unit as students plan for their future employment and career options.

In addition, students can choose to take the optional 4<sup>th</sup> year unit, *ECH 417 Leadership in Early Childhood* which involves an extended placement attached to a professional working primarily in policy related contexts.

### **Terms of Reference 8**

*Examine the role and input of schools and their staff to the preparation of trainee teachers.*

This issue relates largely to the experiences of student teachers in schools as part of the University arranged practicum. The NSW Department of Education and Training requires a minimum of 50 days of supervised practicum for both primary and secondary students and an additional 10 days for primary students completing specialisations in English as a Second Language or Environmental Education. These requirements must be met for the program to be accredited by NSW educational authorities.

There are two approaches to the practicum at Macquarie which have resulted from the traditions associated with the development of the Teacher Education Program in the School of Education in the late 1960s and the transfer to Macquarie University in the early 1990s of the program provided through the IEC covering both prior-to-school services and the early years of schooling. Both the current programs will be outlined in this submission because of their importance to the development of pre-service teachers in knowledge and skills about curriculum and pedagogy and in the inculcation of professional values and attitudes. The strategic management plan for the Australian Centre for Educational Studies proposes to review the practicum of both operations in 2006, using guidelines proposed through the Australian Council of Deans in Education and the National Institute for Quality Teaching and School Leadership.

***Issues in managing the Practicum.*** It is universally recognised that the practicum is central to teacher education programs as it is in the classroom that pedagogical skills are developed, and theories of teaching and learning are contested. Much research on new teachers shows that students value the practicum over most other aspects of their course – because the classroom is the “reality” - and any disaffection of their teacher education program arises from what they see as limited classroom experience.

There are issues in the organisation of the practicum. Four main aspects of the University role are selecting Master Teachers, making appropriate student placements, making school visits and assessing student performance. Other aspects of the relationship between the University and Schools relate to liaison and outreach. Issues in managing the practicum have been covered in the report, *Step Up, Step In, Step Out* by the Education and Training Committee of the Parliament of Victoria (2003). The issues relate to the length of the practicum, availability of school placements, recognition in schools of the contribution of Master Teachers and funding for an intern model of the type available through the Macquarie approach.

**Length of Practicum.** Recommendations to increase the length of the practicum have appeared in several recent reports on teacher education. A figure of 100 days, which includes 80 days of supervised classroom teaching, has been presented as the preferred option although the Victorian Report has proposed 130 days. There is, however, a lack of research: the support for this figure is an assertion, with little evidence, that 100-130 days are necessary for students to gain the competencies

The proposal for additional days as part of the practicum is to make teacher education courses more “relevant” and “allow pre-service teachers the opportunity to develop the skills for future independent, unsupervised teaching” (Parliament of Victoria, 2005).

The unanticipated danger is that field-based courses may result in the “unreflective socialisation of prospective teachers into the accepted norms, mores, and folkways of the profession as it is currently practiced” (Beyer, 1996, p.6). To some extent, this is inevitable. Because student teachers wish to succeed they are more likely to accept and conform to the existing school environment and the values they observe, rather than critically reflect on practice. A practicum experience which prepares pre-service teachers so they become reflective, professional practitioners is more than just a set number of days in school. The Macquarie program, with its emphasis on an internship developed through partnerships between school, student and university exemplifies this broader approach to the practicum.

The length of the practicum that is required for accreditation is 50 days of School Experience. In the Macquarie University TEP, ten days are incorporated into the third year TEP 200-level generic curriculum units and the remaining 40 days completed in the final year. Successful completion of these units is both a degree and accreditation requirement. Additional days may be required if a student is encountering difficulties in satisfactorily meeting the performance standards of the practicum. Students who complete additional specializations may also complete additional Professional Experience.

### **Bases for the School of Education Practicum at Macquarie**

The establishment of the practicum at Macquarie was a significant component of the Teacher Education Program. Some context on this will place the Macquarie approach in perspective. As originally conceptualised in 1969, Macquarie’s innovative approach to “practice teaching” was titled, School Experience. This was viewed as an integrated, concurrent component of the on-campus professional courses. The intention was to broaden the focus beyond the teaching of classes to an exploration of all aspects of schooling. Mitchell (1967) explained the new concept in a formal letter to Wyndham, the Director General of Education in New South Wales.

“Practice teaching” should take the form of “experience in the schools” ... Such an aim is difficult to achieve in the normal type of “block practice” and we propose therefore a form of “apprenticeship” procedure whereby students would be in continuous contact with a school and a senior, experienced teacher or teachers. Well controlled experience, along the lines used in good schemes of medical education, would accompany professional units. It is clear that proposals of this character will require very close collaboration indeed between the University and your Department (p. 3).

In contrast to the standard BEd program at other universities, students at Macquarie were not placed in schools until the third year of their program. This was a deliberate policy to allow

students to complete two years of academic preparation in their discipline and to study some Education units as well. These early studies were to provide an initial and firm theoretical basis from which student perceptions of school life could be examined, placed within a broader context and reflected upon.

In addition, the concept of attendance at one school over an extended time, one day a week, was the antithesis of the usual practice that placed student teachers in schools for block periods of classroom work, divorced almost completely from the work at the tertiary institution. With concurrent attendance at School Experience and University, student teachers had the opportunity to integrate theory and practice and reflect upon their experiences in a supportive environment.

Placement in one school rather than two or three different schools was also deliberate. The intention was that, "teachers trained in our system would become acquainted with the demands and realities of schools" (Mitchell). The expectation was that through regular attendance, the student teacher would come to be considered as part of the staff. He or she would feel familiar in the environment, be able to establish an appropriate relationship with the students, be in a position to observe their growth and maturation, experience the development of learning programs and to participate in the full cycle of the school year. The new form of school experience was described in the 1969 Teacher Education Program Student Guide.

"Practice teaching" in the Macquarie program is an "internship". Students have continuous contact with the school to which they are assigned (p. 4).

It is the notion of continual practice linked to the tertiary experience which moved the school experience to a higher conceptual level than an apprenticeship. The student teacher moved, on a weekly basis, from university to the school. The two sites worked in tandem: the curriculum workshop providing a shared forum for reflection by the cohort of student teachers who, each week, would bring questions and experiences back from their different schools, and the time in schools which allowed practice, the testing of ideas and questions from the workshop sessions, and further reflection. In conjunction with the two professional experiences, student teachers continued their study of the academic disciplines. To aid and support the student teacher in such deliberations, two key figures were introduced, one on campus, the other in schools. The latter, the "Master Teacher" was one of the more radical aspects of the model.

In the early deliberations at the University, the choice between placement of student teachers with a school or with a specific teacher had emerged. The latter was selected, firstly because research had revealed that it had proved the more effective approach in experimental programs at Harvard and, secondly, because it offered maximum flexibility given the student teachers' workload. Mitchell (1973) explained the new role:

the student's experience of school life, of the conditions of the classroom, should be steady, continuous and consolidated. The influence upon the student of the teacher with whom he will be associated will likewise be expected to work steadily throughout his training.

In the same way that the role of the supervising teacher was altered, so too was that of the supervising tertiary lecturer. The curriculum lecturers were to visit each pairing of teacher and student teacher in their school once per semester. This minimal number of visits was a recognition that the principal work of supervision was the responsibility of the Master Teachers with their intimate knowledge of the needs of the particular student teacher. For this reason, the label of "School Visit" was selected over the more common "supervisory visit". Although one important function of the visit was to view the student teacher in the classroom, discussion with the teacher and student teacher and liaison with other members of the school staff, were to be considered important aspects of the visit. Contrary to the more usual practice of the time, visits were to be undertaken by the curriculum lecturer in the specific teaching area. This increased the spirit of cooperation and teamwork as teacher, student teacher and lecturer shared a joint commitment to and interest in a particular subject.

With respect to pedagogy, better professional preparation results from units that focus on the concept of curriculum, rather than the concept of "method". In these units students discuss methods and techniques of teaching within a broad framework, encompassing consideration of the place of the particular discipline within the overall curriculum, the development of a curriculum appropriate to the ages and abilities of the students, and methods of assessment of curriculum outcomes (Macquarie University Senate, 1967, p. 2).

The link between these curriculum units and the School Experience was viewed as vital to the integration of the theoretical and the practical aspects of the student teachers' preparation.

### **Recent Developments in the School of Education Practicum**

Despite staff reductions, the philosophy and structure of School Experience, and its relationship with the curriculum units, has changed little over the years and is still considered one of the keys to the success of the Macquarie program. Students are still placed with a Master Teacher rather than with a school. These Master Teachers are selected, contracted and paid by the University. They play the major role in the assessment of the student teachers as well as acting as role models and mentors. Formal contact is maintained with the relevant curriculum lecturer by school visits and through Master Teacher seminars that serve to both improve their supervision skills and provide professional development. Informal contact is maintained by telephone, fax and email.

The triadic relationship between master teacher, curriculum lecturer and student teacher is central to the program. The School is of the view that this level of partnership is necessary for a practicum program to be regarded as an internship. The following is a report on a school visit.

A **typical visit** to a secondary school begins with a visit to the school office to be 'checked in', sometimes a quick chat to the Principal or Deputy (or to arrange a chat after the student visit is over), and increasingly frequently, a few words with the school's practicum coordinator. Many schools, especially private schools, require that any negotiation goes through the practicum coordinator. Usually the staff room is notified of our arrival and the student teacher or someone else comes and escorts us to the relevant staff room. These introductory formalities invariably take at least 15 minutes, with another 15 minutes taken up in meeting the Principal/Deputy (whenever that occurs).

Once in the staffroom we are introduced to the Head Teacher (if they are not the Master Teacher) and to other staff who are present. If there is time before the class there is frequently discussion about Macquarie, the program and about current educational issues (If not, this discussion generally takes part after the student's lesson). With the introduction of the changes in the HSC, and the involvement of so many Macquarie staff in aspects of its development and in the change to performance-band reporting, we often found ourselves in the role of giving informal staff development and updates to those present. We then talk to the Master Teacher and student - sometimes jointly, sometimes separately - about general progress and about the lesson /class we are to observe. The lesson observation (from 40 to 75 minutes duration) is followed by a debriefing of the student as we go through the notes made during the lesson. There is often a three way discussion with the Master Teacher about general progress, whether the lesson observed was typical, issues that arise and so on. If the student is exhibiting difficulties we usually arrange for them to talk to us on campus in more depth. Another general discussion with other staff members in the staff room then ensues.

### **The Practicum in IEC**

The practicum offered by the IEC has also been found from extensive experience to suit the needs of the early childhood settings, students and staff. Students enrolled in the BEd (ECE) undertake five compulsory block Guided Experience (practicum) placements across prior-to-school and school contexts. They also have the option of undertaking an additional three week block or a 30 day internship in their final semester. The internship and one Guided Experience block may be undertaken in the students' workplace if employed in an early childhood service. All students must undertake at least one Guided Experience block in a K-2



classroom. Those students with a strong interest in K-2 after graduation typically undertake a total of two or three Guided Experience blocks in schools. The number of days required for the practicum at the IEC is 65 whilst there are some additional tasks amounting to about 5 days that require attendance at a Centre/school.

Guided Experience utilises a triadic model for student support and assessment. This means that each student is assigned a school-based cooperating teacher to provide guidance in day-to-day teaching practice and a university-based adviser who visits the student in her / his Guided Experience placement, typically on two occasions during the teaching block for a total of approximately five hours to provide additional support. Student teachers are expected to engage in considerable reflection and self evaluation of their professional practice. Evaluations of students' progress during Guided Experience are undertaken jointly by the cooperating teacher and university adviser with considerable involvement of the student teacher.

Due to a shortage of teachers willing to undertake the role of cooperating teacher, the Institute frequently finds it difficult to place all students who request a K-2 placement. Because of the scarcity of cooperating teachers in K-2 settings, there are occasions when students are placed with cooperating teachers who may not be particularly appropriate role models. This is of concern and it is important to ensure that an effective practicum of willing and highly professional cooperating teachers be increased. Of course, many of the cooperating teachers do a wonderful job and students and staff are greatly indebted to them.

There is a large pool of external University-based advisers primarily consisting of current or recently retired teachers, or those leave of some kind. As previously noted, the IEC also

- employs teachers with current or recent classroom experience to teach on a sessional basis in our undergraduate programs;
- involves students in school visits in several units in the program, apart from the Reflective Practice units in which Guided Experience is embedded.

The connections with schools and prior-to-school services are valued and the IEC is continually striving to strengthen existing connections and partnerships and foster new ones. The quality in preservice teacher education depends to a large extent on the quality of partnerships hence enhancing partnerships will be key to further improving the quality of our programs.

### **Terms of Reference 9**

*Investigate the appropriateness of the current split between primary and secondary education.*

We consider it essential to recognise the specific issues and concerns associated with preparing teachers for different educational contexts. The need to understand the diversity of program types as well as the range of possible structures for the organisation of education is vitally important. We strongly believe that a generic, "one size fits all" model would seriously compromise the quality of schooling necessary in different communities. Teacher education must also not be limited by the current divide. There is need for the students to be able to bridge the primary- secondary split so arbitrarily maintained by schooling structures. The School of Education has acknowledged this by requiring most of its secondary students to complete several days of observation in primary schools with a focus on issues of transition. It is also possible through the BADipEd program to formally qualify for both Primary and Secondary teaching within five years. Several students have taken this opportunity.

Whilst structures may change slowly knowledgeable teachers are able to work across the boundaries and put in place teaching and learning and supportive student services that diminish the difficulties. There ought to be a greater capacity for teachers in the upper primary years to work into the junior secondary years to facilitate transition at a key point in the

educational lives of young people. In addition there should be links between the work of vocational teachers in TAFE and similar settings and school vocational teaching.

Whilst the Inquiry is focused on the current split between primary and secondary education, there are issues to be addressed in the preparation of early childhood teachers. We support legislation to require the employment of only trained early childhood specialist teachers in all prior-to-school centres. In addition, we consider appropriate preparation in early childhood approaches should be provided for teachers in K-2 classrooms in primary schools. The preparation of teachers to work in early childhood classrooms (K-2) requires that specific attention be paid to the research and practice that has been found to produce the best results with young children.

Early childhood teacher education programs tend to differ from primary, middle years, senior secondary and vocational programs in at least several fundamental ways. The acknowledgment of the place of early childhood training in teacher education needs to be stated clearly in documentation arising from this Inquiry as in particular, early childhood teachers:

- Place much greater emphasis on the role of child development theories in informing professional practice. The foundation for curriculum planning, for example, is observation of children and planning for their individual development.
- Play a key role in early intervention into learning difficulties through specialised preparation to enable their identification of children with additional needs and their liaison with relevant therapists, support services and resource agencies, including the Department of Community Services, the Department of Human Services, and Health and Local Council Departments. Early childhood teachers embody the notion of professional educator as facilitators within the community.
- Undertake much more substantial management and leadership components in their roles (e.g., relating to staff recruitment, development and appraisal, budgeting and book keeping, community management committees) if engaged in teaching in prior to school services. These components are necessary in teacher education in order to prepare graduates for the reality that many of them will be employed as Directors of preschools and childcare centres very soon after graduation. Directors are often responsible for the well-being of several hundred children and their families, and for a substantial team of staff, the management and leadership skills required of recent graduates are immense.
- Have important legal responsibilities, including those relating to Childcare Regulations, the Ombudsman's Act, licensing and funding requirements, the Public Health Act, Occupational Health and Safety, Public Health Acts and National Safety Standards for playgrounds and infant equipment. These components are additional to those expected by the NSW Department of Education and Training, for many early childhood teachers come under the umbrella of the NSW Department of Community Services, rather than the NSW Department of Education and Training because of the structural arrangements for children's services in NSW.

### **Terms of Reference 10**

*Examine the construction, delivery and resourcing of ongoing professional learning for teachers already in the workforce.*

A most significant issue to be addressed in this Inquiry is the ongoing professional learning of the profession of teachers. This includes professional development and inservicing of teachers and school leaders as well as the induction of beginning teachers and teachers assuming new roles and responsibilities. Strategies for improving the quality of teaching and learning at all stages of teachers' careers are necessary. These should be based upon the findings of recent research and information about teacher induction and professional development.

The current approaches to professional learning provided by systems have been criticised by teachers for being inconsistent in quality and lacking in timeliness and relevance to the real needs of teachers. The courses have had minimal impact on school programs and on teaching and learning practice. Current arrangements pay lip service to the contribution that universities might make although dialogue on the issue has been positive in recent times without achieving outcomes.

We at Macquarie believe that school systems should form strong university partnerships to assist in the delivery of educational programs. An example of collaboration is the Macquarie ICT Innovations Centre between the NSW Department of Education and Macquarie University which offers programs for teachers and students and its outcomes focused in relation to classroom teaching and learning. In addition to the ICT Centre, Macquarie has partnerships with government and non-government schools for which there is an active program of support such as through the visit by a university staff member as a critical friend and inservice activities related to syllabus implementation and advice about the Higher School Certificate. Staff from ACES are frequently involved in school professional development days and have participated as critical friends with schools on an ongoing basis to assist staff in gaining value from system endorsed projects including the Priority Schools Project.

The role of the University is facilitated by school authorities in many countries. For example in the delivery of a program for First-Time Principals in New Zealand, the University of Auckland Principals Centre manages the program under contract from the Government Ministry of Education. This venture incorporates theory through residential study and online learning, mentoring onsite by trained experienced ex-principals and administrators and practical support for 18 months following appointment. The funding is provided by the education authority. In school districts in Ontario, Canada a consortium of Universities plan for curriculum change, working as critical friends with schools and providing professional learning as required. A similar approach appears to be developing in Australia through the approach proposed for the Australian Government Values Education Program.

Australian university education faculties are central to the implementation of changed practices in teaching and learning among graduates and with funding and formalised arrangements could also support teachers and schools in reviewing and bringing improvements to teaching and learning. The range of postgraduate programs available to school staff also offer a ready opportunity for professional learning to improve current practice and to prepare staff for new responsibilities. At Macquarie regular review of postgraduate programs is undertaken to ensure that units available in education are of relevance and interest to staff attending.

The IEC provides an example of a recognised institution, engaging with the educational community and offering professional development opportunities. The IEC is widely regarded as the hub of a vibrant early childhood learning community of people from diverse professional backgrounds and diverse stages of their professional lives who are collectively seeking to enhance children's well-being by improving their professional practice and increasing their understanding of issues related to young children and their families. Currently, the Institute offers professional development for teachers through the following:

- Continuing education program which has moved increasingly to an 'on demand, on work site' mode of delivery;
- Postgraduate study program;
- Annual conferences and mini-conferences (e.g. the Reggio Emilia Conference, the Child Development Conference).

The IEC is exploring possibilities for the provision of more flexible professional development opportunities that are specifically tailored to individual teachers or self identified groups of teachers. These initiatives include:

- opportunities to audit campus-based units or to have access to web-based unit material in return for supervising student teachers;
- sustained work with student teachers during the practicum [accompanied by a theoretical written paper] to count for credit towards postgraduate study;
- participation in a series of designated inservices, conferences, or workshops (such as the collaborative professional writing sessions for early childhood teachers described by Patterson & Fleet, 1998), accompanied by a theoretical written paper] to also count for credit towards postgraduate study;
- the development of more flexible structures that enable the Institute to respond more quickly to emerging interests in the field and to offer “niche” postgraduate study programs for groups of teachers (such as those with a strong interest in Reggio Emilia influences);
- recognition of the value of action-research into one’s own professional practice, with such research to count for credit toward postgraduate study;
- support for centre / school-based “learning communities” with mechanisms to enable sustained involvement to count toward a postgraduate qualification; and
- specifically to assist in the transition to teaching, participation in sessions for final year students and beginning teachers to collectively discuss issues of professional practice (e.g., Rust, 1999), with credit toward postgraduate study for beginning teachers and toward a Guided Practice / independent study unit for preservice teachers.

We anticipate that these multiple pathways through post graduate studies, and a greater responsiveness to individual teacher’s professional interests will encourage teachers to feel a greater sense of ownership of their professional development than many current structures tend to allow.

### **Terms of Reference 11**

*Examine the adequacy of the funding of teacher training courses by university administrations.*

All areas of the University are affected by budgetary constraints. In particular, Government funding has not kept pace with growth in student numbers and the real costs of providing education. The productivity of University staff has increased markedly in both teaching and research. In education the numbers of continuing academic staff employed at the Institute has more than halved in the past 15 years, despite the number of programs on offer increasing and overall student enrolments remaining relatively stable. The consequent work intensification for staff has inevitably had major consequences. One of the most noticeable changes has been a reduction in the number of optional units available to students and a reduction in face-to-face teaching hours. With more resourcing we would be able to offer a wider choice of options and more intensive face-to-face teaching. Education departments in Universities may be penalized by funding models based solely on student load as these measures do not adequately take account of the intensive and relational nature of pre-service education.

In allocating funds to ACES for the TEP units and the practicum, the University recognises their higher costs and provides additional per-student funding for these aspects of the program. Nevertheless, the Macquarie practicum budget constrains the number of days of Professional/ Guided Experience we can offer students. We have opted for a relatively small number of days overall with high levels of support from University-based advisers (the practicum offered by the IEC has a minimum of 65 days whilst the School of Education has 50 days but both satisfy State requirements).

The cost of the program that we offer across two Departments is \$910 000. The major cost is that of payment for Master Teachers which is set by an industrial award at \$21.20 per day except for the Master Teachers of third year secondary students who are paid at a reduced rate of \$12.45 a day. Master Teachers are required to attend 3 seminars a year and are paid \$34 for each seminar. An Allowance of \$1.30 per student teacher day is paid to schools that have a practicum co-ordinator. The anticipated cost of the practicum with a similar allocation of days will continue at this level as numbers engaged in the practicum are not expected to vary to any extent over the next 3 years.

Whilst significant additional Government funding has been provided for cooperating teachers in 2005, the possibility of an increase in the daily National Award rate for payments to cooperating teachers for their involvement in practicum does concern us greatly. It is clear that significant additional funding would need to be provided to meet the cost of the practicum if either there is an increase in the length of the practicum or a marked increase in payments to Macquarie's Master Teachers.

## REFERENCES

- Beyer, J. (1996). *Creating democratic classrooms: The struggle to integrate theory and practice*. NY, Teachers' College Press.
- Cohen, S. W. (1950). *A comparative study of the development of teacher training in Britain, the United States and the British Dominions*. Unpublished doctoral thesis, London University.
- Education and Training Committee, Parliament of Victoria (2005). *Step Up, Step In, Step Out: Report on the Inquiry into the Suitability of Pre-Service Teacher Training in Victoria*. Victorian Government Printer.
- Galton, M. (1999). Two decades of change in English teacher education. *Asia- Pacific Journal of Teacher Education and Development*, 2, 2, 1-10.
- Mansfield, B. & Hutchinson, M. (1992). *Liberality of opportunity A history of Macquarie University 1964-1989*. Sydney: Macquarie University in association with Hale & Iremonger.
- Macquarie University (1967). *Report of the ad hoc Committee on Teacher Education at Undergraduate Level*. Minutes of Senate Meeting, 24th May. App. 1, Item 8 (11). Macquarie University Archives, RS59.
- Mitchell, A.G. (1967, July). Letter to H. Wyndham, Director-General of Education in New South Wales. Macquarie University Archives, PS 005 /4/4 doc. 139.
- Mitchell, A.G. (1969). First Report of the Vice-Chancellor, Macquarie University, Macquarie University Archives, DS 13 [1].
- Mitchell, A.G. (1973). Third Report of the Vice-Chancellor, Macquarie University Archives, DS 13 [3].
- Patterson, C. & Fleet, A. (1998). Early childhood teachers: Writing to explore professional experience. *Journal of Early Childhood Teacher Education*, 19(1), 71-76.
- Philp, H. (1983). Selected from the series of taped *Recollections of the educational influences upon the founding professors at Macquarie University*. Recorded by S.Cohen. Macquarie University Archives: RS 300[6A]
- Smedley, L.M. (1996). *Partnerships in teacher education. The Macquarie experience*. Unpublished PhD, Macquarie University.
- Teacher Education Program, Macquarie University (1969). *Teacher Education Program Handbook*. Teacher Education Program Archives.