

Distance Education in Asia and the Pacific:

## AUSTRALIA

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### THE NATIONAL CONTEXT FOR DISTANCE EDUCATION

Australia is an advanced industrial nation with a population of sixteen million and in the late 1980s a budget outlay of \$41,628 billion (1986/87). Within that budget outlay the amount allocated to education was \$2,898 billion. While there has been some small variation since then this percentage (7%) has been reasonably consistent. The Commonwealth of Australia is a federation of States - New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania - together with Territories administered by the Commonwealth. The most important of these are the Northern Territory and the Australian Capital Territory where the nation's capital, Canberra, is located. Federation combined the previous colonies of states in 1901.

Most of Australia's sixteen million people live in large coastal cities - either the state capitals or major cities on the south and east coast. It is a multicultural nation with over 20% of the population born overseas. Most were born in either the United Kingdom or Ireland, but a significant proportion of those arriving in recent decades have come from southern Europe and the Middle East. Refugees from Indo-China constituted the greatest proportion of Australia's refugee intake during the 1980s.

The indigenous people of Australia - Aborigines and Torres Strait Islanders - make up about 1% of Australia's population. Many of these live in rural and outback areas, especially in Queensland, New South Wales, Western Australia and the Northern Territory, rather than in major cities. Nevertheless there are substantial communities of Aborigines in the cities, particularly Sydney and Brisbane.

Some Aboriginal community schools teach traditional languages, as do ethnic community schools, usually outside school hours but it must be considered that the primary language of instruction in Australia is English. Nevertheless there are many opportunities to study in other languages in high schools.

Constitutionally education is the responsibility of the States. But the Federal Government has become heavily involved in higher education particularly because of funding arrangements. Within the states, education in government schools (75%) is controlled by State Education Departments usually headed by a Director-General of Education and responsible to a government minister. Centralization is a feature of the administration of public education in all states of Australia. Staffing, curriculum planning and resources are the responsibility of the department. The goal of public education in Australia is equality of opportunity for all students, urban or rural. This is expressed in a common curriculum within each state. Across Australia, curriculum difference is more a matter of degree or emphasis rather than content. Distance education in Australia fits into the ethos of equality of education and uniformity of practice.

The public schools are financed through a redistribution of federal tax. Australia's universities and Colleges of Advanced Education (CAEs) are autonomous institutions established under Acts of State Parliament and are the only institutions with the power to

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establishment of universities and colleges is a state responsibility and traditionally they were state funded. Tertiary education is now almost completely funded by the Commonwealth. Under a series of trade-off agreements in 1974, the Commonwealth undertook total funding responsibilities for the tertiary sector in order to achieve its policy objective of free tertiary education. Thus since 1975 there have been no tertiary tuition fees. In the 1986/87 budget an administrative charge of \$250.00 (Aus) was introduced. In 1988/89, charges were introduced and levied as a tax on future or present income, known as the Higher Education Contribution Scheme (HECS). Technical and Further Education Colleges (TAFE) are essentially vocationally orientated but also provide adult non-vocational education and are funded mainly by the states (75% State and 25% Commonwealth). Federal Education Commissions formulate and administer federal education policy within the government's financial guidelines.

Australia is a large continent covering an area of approximately seven million square kilometres. Nevertheless it has a very extensive telephone and telecommunications system. Most Australians, except those in the most remote outback, have telephones and/or radio phones and can receive at least one national carrier both on television and over radio - the Australian Broadcasting Commission (ABC). Australia is known as one of the leaders in digital telecommunications. The postal system is efficient, with mail between capital cities taking between two and three days and mail to the outback, even to some of the smaller rural stations, usually takes no more than two weeks unless there is inclement weather. Newspapers tend to be state based with two major chains. Television ownership and provision is similarly state based. The national carrier, the ABC, provides both national and local state programs.

It would be true to say that the communications system in Australia is an efficient one with the variety of modes of distribution becoming a modern industrial nation. Satellite communications to the outback are increasing with the use of satellite dishes.

## **HISTORY AND BACKGROUND**

Australia has a total surface area of almost seven million square kilometres and a population of sixteen million people. Australia is a highly urbanized country with almost 70% of its population living in cities along the coastal regions and over 50% of the population in capital cities. Distance education in Australia has therefore been a large part of the educational system at primary, secondary and tertiary levels since the turn of the century when Australia federated.

Distance education in Australia is provided in three different sectors; the school sector (Primary and Secondary), the Technical and Further Education sector (TAFE), and what is called the higher education sector. The latter is made up of the universities and the old Teachers Colleges which became Colleges of Advanced Education (CAE) in the 1960s. Many of these are now universities in their own right or part of multi-campus universities.

Distance education at primary and secondary levels commenced in Australia soon after the turn of the century, when this mode of teaching was used to provide education to children in outback and rural areas. It should be emphasized here that because of the politically powerful influence of rural graziers, the people in the rural outback have always had far greater political lobbying strengths, skills and access to a political system which is biased towards them rather than city people. This has arisen partly because of the needs of a

conservative coalition and partly because of Australia's dependence on rural export commodities.

The teaching material used for distance education at this time was initially print based and students were normally assisted by a member of the family. These correspondence lessons were sent out from the individual state correspondence schools attached to the state based Departments of Education and from here the Australian Schools of the Air evolved. Again these Schools of the Air were state based. From the beginning, and up to the present, a small group of teachers based in broadcasting studios and using short wave radio transmission gave daily assistance to students spread over tens of thousands of kilometres.

Technical and Further Education Colleges in Australia have generally been responsible for providing education at the trade level. However they have also been involved in short vocational courses and now provide courses at the diploma or sub-professional level in vocational type areas. The TAFE Colleges have a tradition of teaching at a distance since the late 1920's-1930's and are state based. There are six TAFE Correspondence Colleges.

In the post secondary education sector Distance education also commenced soon after the turn of the century. The University of Queensland, established in 1910, was required by law in its initial charter to introduce a correspondence program. The University of Western Australia entered into Distance education in its first five years. During and after World War II there was an upsurge in distance teaching as the universities co-operated to enable returned service personnel to continue with university studies. Major universities including Sydney and Melbourne entered into this scheme but both ceased the practice by the end of the 1940's. The University of New England presently has the greatest number of external enrollments of any tertiary institution in Australia and first offered external studies in 1955.

What were known as CAEs in the period from the 1960's to the 1980's grew out of the Teachers Colleges. As the Teachers Colleges related to teacher education they were state funded. The CAEs were also state funded, although these funds came in a direct grant from the Federal Government. In the 1960's these teacher training colleges were allowed to widen their offerings and became CAEs. This was the beginning of a binary system of tertiary education; so called because of its two elements - universities and colleges. The universities offered academic degrees and the colleges professional diplomas. The universities were funded by the Federal Government on an autonomous basis for research as well as teaching. The colleges were also funded from the Federal Government but through the State Government and only for teaching, not research.

Many of the colleges and some of the universities were not situated in population growth areas so an attractive way to increase student numbers was by offering some of their courses through the Distance education mode. This resulted in forty-three colleges and five universities offering some of their courses through Distance education by 1988. Significantly only three of those universities and a few of the colleges were in metropolitan areas.

In an attempt to reduce the high overhead costs associated with the proliferation of small colleges in the late 1970's, the government used fiscal methods to force the amalgamation of some adjacent institutions. This led to substantial opposition and lost the government much support. In 1987 a different political party abolished the binary system and offered financial inducements to colleges and universities to amalgamate. Essentially the government stated it would offer a funding level for research and teaching only to institutions with more than the equivalent of 9,000 full-time students (for government funding purposes,

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part-time and distance education student loads are converted to the equivalent full-time load). For those institutions with between 5,000 and 9,000 students it would only give funding for teaching and research to those faculties which were able to specifically justify it; those institutions with less than 5,000 would only be funded for teaching; and those with less than 3,000 would not be funded in the national system.

Distance education policy was also changed in 1987. The government announced that funding for external (distance) students would be the same as for on-campus students but funded on the assumption that 75% was for teaching and 25% was for the delivery and development of teaching material. Only designated Distance Education Centres (DECs) could deliver and develop such courses. Designation was limited to eight institutions and based on size and level of the Distance education professional infrastructure. It must be emphasized that most of the colleges offering Distance education courses in 1989 continue to offer them in 1990 and 1991 but had to do so under the auspices of a DEC. The result of these two policy changes has been a series of amalgamation often between institutions separated by long distances. A good example of this is the University of New England in northern New South Wales. The new university is a result of the amalgamation of the old University of New England in Armidale; the Armidale College of Advanced Education; Northern Rivers College of Advanced Education 400km away, north east in Lismore; and Orange Agricultural College in Orange over 600 km south east of Armidale and over 1000km from Lismore. The University also has a small growth campus 200km east of Armidale at Coffs Harbour. Distance is a major difficulty facing the new university.

The eight Distance Education Centres that were subsequently designated are geographically spread across the country and have varying features. Characteristics that tend to be common are that they are multi-campus across distance, the students are distanced from the face to face teacher and they have more than 2,000 Distance education students from any campus. The University of New England is the largest in both geographical diversity and external student enrollment, which is currently more than 10,000.

It should be noted that the two DECs in Queensland are in the regional centres of Toowoomba and Rockhampton, and the latter has small growth campuses in the nearby cities of Gladstone, Mackay and Bundaberg. Charles Sturt University (CSU) centred in New South Wales encompasses the widely separate regional cities of Bathurst and Wagga and has a growth campus in Albury/Wodonga. One of the Victorian centres links the eastern part of Melbourne, Victoria's capital, with Churchill, a small rural town in Gippsland, and Deakin University links a large industrial city, Geelong, with the regional city of Warnambool. In South Australia the Centre is in the state capital Adelaide and in Western Australia the Centre is in the State capital, Perth. The eight Distance Education Centres are The University College of Central Queensland, The University College of Southern Queensland, The University of New England, Charles Sturt University, Monash University, Deakin University, and University of South Australia and Western Australia Distance Education Consortium. Whilst all are national institutions, approximately 80% of the students are from the home state.

It is worthwhile at this point to briefly describe the institutional structure of the Distance Education Centres. All are based on what is often called The New England Model of Distance Education, after the system which was established in the mid-1950's at the University of New England. It was an exemplar model for international tertiary distance education developments prior to the open universities which flourished from the 1970's

onwards. In Australia it was the model that all universities and colleges, established from the 1960's onward, followed. The previous model from The University of Queensland (U of Q) had a separate division of external studies with its own teaching staff. The New England model did not have a separate teaching division; it had a Department of External Studies which was responsible for administration and student services. In the 1970's some of the larger institutions offering distance education added a development unit to assist in the improvement of teaching material, but ironically the University of New England did not do this until the late 1980's.

The essential characteristic of the University of New England Model is that the institution is dual mode with on-campus and off-campus students. The on-campus curriculum is the same as for off-campus students. Equivalence between the two modes was thus ensured at a time when the concept of distance education was still being questioned. The implications of this are wide ranging because the dual mode system has the same curriculum for internal and external students, the same teachers, the same examinations and the same opportunity for interaction. But it must be acknowledged that counselling by on-campus staff is done by phone and face to face tutoring, during residential schools for external students. There may be on-campus residential schools, usually four days per subject, per semester, and weekend schools in capital cities such as Sydney. Audio tapes have been despatched since the late 1960's.

The University of New England presently uses interactive radio and television as well as interactive videoconferencing and teleconferencing. In effect, the same lectures given on campus are put into print with technology enrichment. The strength of this model is that on- and off-campus students have parity. The weakness in the early model was the lack of a ready place in the organization for professional distance education developers and residential schools became important as a means of teaching. This trend has been reversed from the late 1970's onwards and now in the early 1990's all Distance Education Centres have development units and residential schools are becoming less important.

As noted, with the decline in the importance of the residential schools there has been an increase in the use of technology. The use of audio tapes, particularly for foreign language teaching, started at the University of New England in the 1960's and was further developed in the 1970's. The use of teleconferencing via telephones and videos was developed in the 1970's and 1980's. The University of New England broadcasts both audio and video programs on radio and television. So while print remains the core medium, there is a wide ranging use of other technologies.

## **THE LEGAL STATUS OF DISTANCE EDUCATION**

The legal status of distance education is difficult to delineate, largely because it has been an integral part of the education system in Australia since its creation in 1901. From the beginning, state school departments were offering educational opportunities to students in remote areas through correspondence and later through the School of the Air. Technical and Further Education colleges from the 1930s onwards also offered in rural and remote areas similar courses to those they were offering on-campus students.

At the higher education level, the University of Queensland in 1910 and the University of Western Australia in 1911 in their initial charters had to provide education for those unable to attend on-campus studies. An example of the enabling by-law is the

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University of New England Bill (Act 34, 1953) which was passed in December 1953 and gave the Council of the new autonomous university power to:

establish within the university a Department of External Studies for the purpose of providing appropriate tuition for students who are unable to attend lectures at the university and of enabling degrees to be conferred upon such of them as, by examinations satisfy the requirements of the university.

## **OVERVIEW OF CURRENT SITUATION**

### *Aims and Objectives of Distance Education*

There are no overall aims and objectives of distance education as they vary from institution to institution. They tend to be concerned with issues of access and equity. The following are examples:

The college endeavours to meet the needs of groups which have, for many reasons, been disadvantaged in the education system. It seeks to break down the barriers that have denied access to higher education by Aboriginal people, women and people with disabilities.  
(External Studies Guide, The South Australian College of Advanced Education, 1991, p 3).

And further:

...External Studies has a vital role to play in ensuring access to higher education for people in rural and geographically isolated areas....The university considers it has a valuable role to play in using external studies to provide access to higher education for educationally and socio-economically disadvantaged adults...(Designation as a Distance Education Centre: A Submission to the Department of Employment, Education and Training, The University of New England, 1988)

### *Control, Organization and Management Structure of Distance Education*

The levels of distance education provision include the schools, TAFE Colleges and the higher education level. Provision of these services is State and Federal Government funded, it is neither private nor jointly established. At the school level the funding comes as part of the normal state education department budget. A proportion of that is given to the state correspondence school, which is part of the management structure of the Department of Education, responsible to the minister. Likewise, the TAFE correspondence schools come within the Technical and Further Education Department, which is responsible through the Director-General to the State Minister.

Funding for the universities and CAEs (it must again be emphasized that by 1991 most CAEs amalgamated with universities to create a nationally uniform system) comes from the Federal Government, but they are autonomous institutions. All of them are dual mode institutions so again distance education is not a separate establishment within the universities. There are Distance Education Centres but they come within the established university structures. The net result is that there is actually no overall governing body for distance education in Australia. In the last three years the National Distance Education Council was established, with sub-committees considering areas such as technology, data base and standards. This is not a governing body; but rather a policy development committee.

The responsibilities of administration, setting academic standards, resource planning, management and dissemination of information are distributed throughout the management

structure of the state schools and TAFE departments, and also within the autonomous management structures of the university. Thus the relationship between distance education and other education institutions is difficult to determine because distance education is part of the same structure and is not a separate institution. In many ways this might be seen as the strength of the Australian model.

### *Financing Distance Education*

The source of financial support for Distance Education Centres and programs is largely from State and Federal funding. However, while the Commonwealth is by far the dominant source of financial support (for instance in higher education it provided 84.5% of net income in 1986) other sources have steadily increased in importance over recent years. Total income from non-Commonwealth sources rose to 15.5% in 1986. Growth in the different items of non government revenue has been uneven, reflecting in part the different strengths of the university and advanced education sectors. For instance the universities, particularly the long established ones, appear better able to derive income from endowments, bequests and donations, whereas some of the old CAEs are benefiting from their traditionally close links with industry. In the Commonwealth sector there has been a growth in university funding through sources such as the Australian Research Grants Committee; these sources provide funds earmarked for specific research projects. Table 1 shows the sources of income for higher education.

Budgetary comparisons between distance education and non-distance institutions are very difficult to make in the Australian context as funding is often not separately designated. Nevertheless it is instructive to look at the differences in the eight Distance Education Centres, between the ratio of internal to external teaching as shown in the following table.

TABLE 1: Source of Income for Higher Education (in %)

SOURCE:	<u>Universities</u>		1986	<u>Advanced education</u>		<u>Higher education</u>	
	1979	1983		1983	1986	1983	1986
<u>Commonwealth Government:</u>							
CTEC	86.2	82.1	78.3	89.2	82.0	84.5	79.7
Other	4.8	6.6	7.2	1.1	1.0	4.7	4.8
Total	91.0	88.6	85.5	90.3	82.9	89.2	84.5
<u>State Government:</u>							
Total	0.7	0.6	0.9	1.0	5.8	0.7	2.8
<u>Non-government:</u>							
Investments	2.2	4.2	5.0	3.1	3.3	3.8	4.3
Endowments, donations and grants	3.5	4.3	5.2	0.1	0.4	2.9	3.4
Other:	2.7	2.3	3.4	5.5	7.5	3.4	5.0
Total	8.3	10.8	13.6	8.7	11.3	10.1	12.7
Total all	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The University of New England at Armidale (UNE) is the only DEC to show external costs substantially lower than internal levels at 82%. In the first round of estimates,

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Charles Sturt produced similar results to UNE but is now included with the majority of DEC's in a middle placed group. It should be noted that UNE has had problems with the depreciation item and if this is omitted, the ratio of external to internal cost rises from 82% to 88%. UNE is still on its own relative to the other DEC's even with this adjustment.

### *Levels of Cost and Evidence of Economies of Scale*

UNE has the lowest external cost relative to internal and is one of the nation's most important suppliers with over 3,000 external EFTSU and 41% of it's total load in this mode. The low percentage does not, however, correlate with a low dollar cost. UNE is one of the DEC's with the highest per EFTSU costs in both modes at \$7,700 to \$9,300. The cost data do not therefore, appear to show obvious evidence of economies of scale, although this assertion must be tempered by a recognition that the absolute level of average per EFTSU costs will be strongly influenced by the discipline mix at an institution. These have not been factored out in this study.

The two Queensland DEC's estimated at the lowest absolute levels of costs among the remaining DEC's at \$5,300 per EFTSU at Southern Queensland and \$6,300 at Central Queensland. All other DEC's reported costs of upwards to the \$7-8,500 range, with (limited) external costs at each institution generally about 1-5% lower than internal....(EJ Harman, *The Cost of Distance Education at Australian Distance Education Centres*, 1991, pp 9-12)

### *Geographical Coverage of the Provision of Distance Education*

At the school and TAFE level there are no geographical limits other than state boundaries. In other words, students anywhere in the state with the department's permission can study at distance, both at school and at the TAFE level. The eight Distance Education Centres at the higher tertiary education level are not state bound, but are national providers. They tend to be parochial, however, and 75-80% of the students study at a DEC in their home state. Nevertheless all of them would be able to point to students from the other side of the country. It is well worth emphasizing that most of the Distance Education Centres like the University of New England have the majority of their students in urban areas close to, or in proximity of, on-campus teaching. The provision of distance education which started in Australia at the beginning of the century for rural and remote students is now providing opportunities for those who elect to study by distance education in whatever institution they choose.

### *Instructional Systems*

The primary method of delivery utilized for distance education at all three levels is print despatched by mail. There are some significant exceptions to this, such as the internationally famous School of the Air. Nevertheless even they have very strong print components. The radio component is more for tuition and interaction. The TAFE system is using satellite transmission for one-way video/two-way audio and also for graphic transfers in some states. The Distance Education Centres at the higher education level also use print as the core medium but include other technologies as part of their teaching materials. Audio has been used since the mid-1960's particularly in the development of language teaching at a distance. Video has been used since the 1980's and some universities, especially the University of New



England, have developed a wide range of video material. The University of New England also uses broadcast radio and broadcast television.

An interesting development in the provision of the instructional systems of distance education will occur in 1992 when a two-year trial of television based open learning (at tertiary level) will occur. Eight to ten first year accredited university courses will be presented with integral television components. These will be accompanied by print material which will remain the core learning medium.

### *Enrollment in Distance Education*

The most recent figures available for distance education are based on 1990 enrollments. The statistics for higher education (Universities, CAEs, TAFE) are published in the *Selected Higher Education Statistics 1990* by the Federal Department of Employment, Education and Training. Due to the nature of higher education funding and administration the data is more readily available for universities. The state based primary and secondary correspondence schools data is not as easy to collect.

The type of enrollment is broken down into external and internal full-time and internal part-time; for the purposes of this paper full-time and part-time internal will be grouped together as internal. In 1990 there were 52,712 external students and 432,363 internal students (299,511 FT, 132,852 PT) enrolled in higher education institutions in Australia. Therefore the ratio of external to internal students is one external student to eight internal students. Of those 52,712 external students, 22,666 were new to their course of study. Data pertaining to higher education graduates is not defined in terms of internal or external study; the combined graduates from all disciplines at higher education institutions in Australia was 90,482 in 1990.

### *International Affiliation and Co-operation*

Many individuals and departments in Distance Education Centres are members of The Australian and South Pacific External Studies Organization (ASPESA's) - which covers Australia, New Zealand, The South Pacific and Papua New Guinea. Many of ASPESA's members also hold membership of the International Council for Distance Education (ICDE). Their membership is now in excess of eighty individual members as well as significant institutional participation.

### *Growth and Expansion*

There appears to be no planned expansion to distance education in Australia in the next 5-10 years. Growth may come from the Distance Education Centres at the tertiary level if those centres cannot fill their student quotas by internal on-campus students. It is unlikely that growth will occur in correspondence schools as there is a slow de-population of the rural and remote areas. Whilst the service will continue it is doubtful that the population will increase in those areas. This is probably also the case for TAFE correspondence colleges.

The major factor hindering the expansion of tertiary distance education development in Australia is the system of funding. As has been emphasized throughout this chapter, funding is provided by the State and Federal Government. They fund on a quota system, for a fixed number of students - student demand is not taken into account in determining student enrollment. Institutions or separate departments use their budget to service their enrolled students, if they exceed the budget there is no increased funding.

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There seems to be little doubt that in some subjects the enrollment could be doubled. But institutions are unlikely to get increased funding so student numbers are not significantly increased. If there was to be growth in distance education in Australia it would only be within the projected growth for education in general. Such growth may occur because of a change in preference for distance education at the tertiary level. There is likely to be a decline at the school and correspondence level with the continuing de-population of rural and remote areas.

### *Problems and Issues*

Although 25% of schools in Australia are private, there is only one small private tertiary institution. Government funds thus dominate the education sector. It is a matter of ongoing concern whether private sector funding rather than Government funding will support expansion in distance education.

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**Appendix I**

**Research Activities in Distance Education**

Research in distance education is vast. The following are taken from the publication *Research in Distance Education* published by Deakin University in 1989 as an example.

Morgan, A. What ever happened to the silent revolution? Research theory and practice in distance education.

Grace, M. Hermeneutic theory in research in distance education.

Evans, T. Putting theory into place: developing a theory-based comparative research project in distance education.

Guy, R. Research and distance education in third world contexts.

Campion, M. Post-Fordism and research in distance education.

Bigum, C. Chaos and educational computing: deconstructing distance education.

Nation, D. Reporting research in distance education.

Altrichter, H. Action research in distance education: some observations and reflections.

Nunan, T. A case-study of research methods course development for Masters awards.

Holt, D, Petzall, S, and Viljoen, J. Before .... and after: MBA participants' first year experiences of distance learning.

Mousley, J and M. Rice. Pedagogical evaluation and change: teaching and research in mathematics distance education.

Ellerton, N and Clements, K. Culture, curriculum and mathematics distance education.

Thompson, D. If it's good for you do you have to swallow it? Some reflections on interaction and independence from research into teletutorials.

Castro, A. Tinker, taylor, soldier, spy.....Roles and challenges in evaluative studies of technological innovations.

McNamara, S. At the end of the line is a learner - whom is distance education really for?

The following papers are an example of the research taking place at the Distance Education Centres, from the 1990 research report of the University of New England.

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Arger, G. 'Distance Education in the Third World' *Open Learning*, Vol 6, No.1, Longman Group Ltd, Essex, February 1991.

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Arger, G & Tran Dinh Tan 'VIPOU, Vietnamese People's Open University: The Evolution of an Ideal' *Distance Education: Development and Access*, ICDE, Caracas, October 1990.

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