Youth and age: shared learning

SIX SOCIAL workers recruited and headed by a Monash lecturer have completed a 12-month study into the possibility of starting an Australian "foster grandparent" scheme.

Such a scheme is both feasible and desirable in Australia, says the head of the study group, Mr. Cliff Picton, of the Monash School of Social Work.

The group has recommended a start be made in Victoria with a nine-month pilot project involving 20 foster grandparents and is seeking funding from charitable trusts to get it under way.

The idea is based on an American program, started in 1971, which arranges for retired people to "adopt" needy children, generally those facing long-term institutional care of one kind or another.

They visit the children on a regular basis, providing care which can range from reading stories to helping them learn to walk, speak, or develop confidence in social contacts.

Picton says an evaluation of the American scheme last year, based on a 25 per cent sample from 157 projects involving 13,600 foster grandparents, has shown it provides a variety of benefits to both them and the children.

Important gains reported by foster grandparents include a feeling of usefulness, independence, companionship, satisfaction from helping children, extra income, love, happiness, being less lonely, self-esteem, pride, being busy, being needed, and acceptance.

Benefits noted in the children included an improvement in communication skills, a reduction in anti-social behaviour, development of other skills (such as walking), higher maturity level, a sense of security, better school performance, better general disposition, improved self-image, improved relations with authority, improved physical health, improved relations within their own peer group, and improved attention span, grooming and table manners.

Picton was asked to form the study group by the Victorian Council on the Ageing, of which he is a member. Those he asked to assist him are Miss Lesley Blanchard, senior social worker with Melbourne's Royal Children's Hospital; Mrs. Eva Meredith, senior social worker with the Pres-Methodist Department of Child Care; Mrs. Margaret McGregor, director of the Southern Family Life Service Association; Miss Shirley Ramsay, a social worker in the Melbourne suburb of Nunawading; and Miss Dorothy Eaton, Presbyterian social worker for the aged.

Both Federal and Victorian State welfare departments have promised support, except in the vital area of finance. However, grants totalling $10,000 have been made by the Sidney Myer Trust and the Myer Foundation, enabling the project to begin soon.

The Victorian State Government has guaranteed to provide the "raw materials" through its welfare departments dealing with children and aged people.

"As there are more than 375,000 retired people in Victoria — and 700,000 Australia-wide — from which to draw our supply of foster grandparents, there is obviously plenty of scope for the scheme," says Picton.

"There is also a distressingly large number of children in State institutions of one kind or another," he adds. "The Victorian Social Welfare Department's annual report to June last year indicated there were at that time 2,600 State wards.

"And that's only the tip of the iceberg. "It doesn't take into account a larger floating population in places like hospitals and establishments for children with handicaps such as deafness, spasticity, and mental defects.

"We are probably talking, in overall terms, of 8,000 to 10,000 children."

Picton says the pilot scheme would pay the 20 foster grandparents $1 per hour plus travelling expenses for 20 hours "work" a week. He describes the low pay rate as "deisory" but says there is little hope of improvement unless the scheme gets government funding.

Continued overleaf
Financial gain

Continued from page 1

Because of administrative costs, including the part-time salary for a co-ordinator, it will cost an estimated $31,000 over the nine months.

"The financial gains to the elderly people are so small that it is unlikely any would volunteer purely for the money, although one of our aims is to help those who to whom an extra few dollars means the difference between eating well and going hungry," Picton says.

The scheme would recognise that "in addition to old people suffering from loneliness, emotional deprivation and a general feeling of being stigmatised by the community, they're also suffering economically by being put in the poorest economic group in Australia".

Once findings from the pilot project have been collated, it is hoped to spread the scheme Australia-wide and to make new efforts to obtain State and Federal funding.

"We feel the scheme should become part of the structure of social services in this country," he says. "It would not only result in the poorest economic group in the country, they're also suffering economically by being put in the poorest economic group in Australia." He says.

"Many parents, such as those from country areas, are prevented by geographical circumstances from spending an hour or two with the children each day."

"In those cases the foster grandparent would give supplementary support to that provided by the family.

"In the case of children with no family support, they would provide the child with a figure of continuity, affection and stability."

Picton has already handled one case which he feels demonstrates the value of the scheme. A hospital social worker asked him to find a foster grandparent for a small boy admitted with serious burns.

There was a suspicion that the boy's single mother had been instrumental in causing the boy's injuries," he explains.

"The child had reacted very badly to being hospitalised and had withdrawn to the extent of spending most of the time hiding under his bedclothes or pillow.

"I found someone to act as his foster grandmother and, through visiting him on a regular basis, she managed to get him to respond favorably. She also got to know the mother, who was not terribly well equipped in the field of child care.

"When the child was eventually discharged from hospital, he took his foster grandson home with him. She continued to visit him there and was also able to help his mother in her efforts to cope with raising the child."

"Without his foster grandmother's help, there is a possibility that boy may have become permanently withdrawn from the world and been institutionalised for the rest of his life."

Tens of thousands in prospect

He says it is hard to estimate how many foster grandparents could eventually be involved, but sees the figures reaching tens of thousands.

The scheme deserves government funding because it would produce indirect economic benefits for the country, Picton says.

"Many children could be helped to the extent that they will be able to make their own way in the world rather than spending their lives in institutions," he points out.

"And keeping a child in an institution is more expensive than sending him to the most exclusive private school.

"On the other side of the coin, surveys have shown that many old people unnecessarily burden health services by seeking pills and potions for aches and pains which often have a psychological base.

"One of the main gains recorded from the U.S. program was that the health of old people improved after they joined the foster grandparents scheme. They become less preoccupied with themselves and spent less time consulting doctors."

The proxy grandparents would not be "just pulled in off the street and told to go and visit so-and-so," he adds. Those interested would first be screened to discover their interests, skills, and knowledge.

They would then undergo a training program to prepare them for handling problems they might encounter.

Most institutionalised children in need of support come from the "less fashionable" areas of cities like Melbourne, says Picton.

Because of this, the pilot scheme will seek foster grandparents from similar areas.

"Overseas experience shows that elderly people from the same social strata are particularly able to relate to these children. They are able to speak the same language and tune into the child's knowledge — to talk about the sorts of experiences the child might have encountered — because they might have come from the same suburb or even the same street."

"While most of their "grandchildren" would come from backgrounds with a lack of family support, not all children in institutional care are orphaned or abandoned or have parents who can't cope with their disability, he adds.

"Many parents, such as those from country areas, are prevented by geographical circumstances from spending an hour or two with the children each day."

"In those cases the foster grandparent would give supplementary support to that provided by the family.

"In the case of children with no family support, they would provide the child with a figure of continuity, affection and stability."

Vincent believes the hall has now established itself as the "most prestigious auditorium" in Victoria.

"The design is such that we offer huge advantages to performers and patrons alike," he says.

"Performers recognise it as being ideal for musical, vocal and oral performances while patrons enjoy its comforts," he says.

Many groups are already taking advantage of the hall's modern facilities and present, bookings are being taken for functions running into 1980.

Among the logistic "problems" Vincent will have to tackle later this year will be the staging of a performance by a 450-voice choir drawn from nine schools in the Eastern Independent Schools group.

Each school will contribute 50 singers to the massed choir, a practice the group began in 1972 as an inter-school cultural project.

Interspersed in the heavy program of school speech nights and concerts are contemporary music recitals, the final of a national electric organ playing competition, a social studies seminar and a program of opera and operettas in concert.

Vincent says Robert Blackwood Hall has not only played a notable role in the day to day life of Monash, but it has also satisfied cultural, educational and entertainment needs of the community at large.

"I can see that within a couple of years, we may be embarrassed by having to turn away groups which want to use our facilities," he says.

MONASH UNIVERSITY's principal meeting place — Robert Blackwood Hall — has a wide ranging program of educational, musical, cultural and community activities set down between now and December.

Functions booked for the hall include symphony concerts, school speech nights, rock and pop concerts, brass band championships and lectures.

During July, October and November, it will be the scene of those necessary rigors of university experience — examinations.

But examinations will be forgotten in December when all the ancient pageantry and tradition of university life comes into focus with a colourful graduation ceremony.

The Australian Broadcasting Commission will also take advantage of Robert Blackwood Hall's excellent acoustic attributes to conduct recording sessions and it will continue its renowned Gold Series concerts there.

According to hall manager, Mr Don Vincent, the hall is more than living up to the expectations of its management committee.

Vincent says there are only a few days during the next six months when the hall will not be used by day and/or night.

The hall, named after Monash University's first chancellor, Sir Robert Blackwood, was completed in 1971 at a cost of $1.2 million, of which $600,000 was subscribed by nearly 2000 individual donors.

Special acoustic features of the hall allow it to be "tuned" for performances ranging from a lecture to a full symphony concert.
Science and the hunt for diamonds

A MONASH postgraduate geology student with considerable experience in prospecting for diamonds in the field is now studying new ways of hunting for them . . . with a microscope.

He hopes to improve on existing methods of tracking diamonds down by following a trail of minute particles of associated minerals. These minerals are trapped in the gravel of watercourses running from diamond-bearing rocks.

The gem-stalker is Robert Mosig, who is studying for a Master of Science degree in the Monash department of earth sciences, under the supervision of senior lecturer Dr. Ian Nichols. His thesis is on "the mineralogy of Australian kimberrilies".

These (named after the Kimberley diamond area of South Africa) are "pipes" of rock that were shot to the earth's surface hundreds of millions of years ago from more than 150 kilometres down. It was there, in the heat and pressure of the partially molten mantle, that diamonds were formed.

Kimberrilies are believed to have spurted up as a mixture of gas (mainly carbon dioxide and water vapor) and molten lava through faults in the earth's crust, and then gradually solidified into rock form.

Some, but not all, contain diamonds.

All worth excavating

Kimberrily pipes can range in surface area from the diameter of a dinner plate to dozens of hectares. Even a small one, if diamondiferous, is worth excavating.

The most favorable areas for diamond search are geological features known as cratons. Craton is the scientific name for an area of very old rock which has remained virtually untouched by geological upheavals since the pre-Cambrian era ended about 570 million years ago.

Cratonic areas form the "cores" of most of the continents, and they often contain kimberlites "intruding" through them. But the weathering effects of hundreds of millions of years have made many of the kimberlites, particularly those in Australia, almost indistinguishable from the surrounding craton rock.

Mosig says this is why scientific prospecting techniques such as he is working on are necessary to track them down.

"Even a trained geologist could walk across one and not recognise it," he explains. "But in the last eight years geologists have pinpointed various heavy minerals which are usually associated with them."

In existing methods of prospecting for traces of these indicator — or "pathfinder" — minerals in stream beds, a topographic map of the area of interest is divided into a grid pattern of squares, each covering about 15 square kilometres.

After the drainage system of creeks and rivers is worked out, a series of sites is chosen from which to collect samples of streambed gravel. About 40 kilograms of gravel are scraped up at each site.

Back in the laboratory, each sample undergoes a liquid separation process to remove the grains of heavy minerals. This leaves about 2 kilograms of concentrate from each prospecting site to study.

As the pathfinder minerals are generally non-magnetic, the sample can be further reduced by attracting out unwanted minerals with a magnet.

Then comes the exhausting job of studying what is left under a microscope — grain by grain.

While working with exploration companies, Mosig learned to look for nine types of mineral which are likely to have been washed away from kimberlite bodies. These are pyrope, chrome diopside, enstatite, picrolite, olivine, chrome spinel, phlogopite, zircon, and kimberlritic rutile.

Mosig is now carrying out chemical analyses of kimberlite indicator minerals from a number of Australian occurrences, in an effort to find out which peculiarities of their chemical composition can suggest association with diamond.

One of the reasons Australia is considered a good bet for diamond prospecting is that the cratonic area of pre-Cambrian rocks covers about two-thirds of the continent — almost all of Western Australia, South Australia and the Northern Territory, with extensions into the eastern states.

Continued overleaf
How children perform physically

A MONASH study of physical performances in primary children will help physical educationists devise specific programs to remedy problems in particular children.

Mr Brian Jeanes, who carried out the study, says data produced during the study can also be used to “screen” for physical weakness in children.

According to Jeanes, little or no objective data on a broad scale on physical “profiles” of children have been systematically collected previously in Australia.

The project, which was supervised by Mr Norman C. Nettleton, of Monash University Education Faculty, was carried out during the second year of Jeanes’ Bachelor of Special Education course. For it, Jeanes surveyed 2097 school children drawn at random from 67 schools, including five in the country, five in the inner city and the remainder distributed throughout the metropolitan area. All the schools had physical education teachers who assisted in collecting the research data.

The 12 tests administered to the children sought to gauge profiles in performance ranging from perceptual motor to fine motor performance to cardio-vascular endurance.

From the tests, percentile tables covering the range of performance profiles were produced. This “normed data” covered performances for both boys and girls at six month age increments, from eight to 11 years inclusive.

“The tables produced from the study will enable us to look at any one of the twelve test areas and say whether a child is above, below or average in performance compared to his age group’s sample measured in the survey,” Jeanes says.

Jeanes says the 12 tests are an attempt to combine motor performance and physiological strength indicators to build up a profile of physical capabilities in the children.

Australia good bet for gems

Continued from page 3

Within the cratonic area are a number of zones where deep earthquakes occur. In the past, these earthquake zones may have contained the faults in the earth’s crust along which kimberlite bodies rose.

A further reason for diamond prospecting in Australia is a geological theory that Australia was once part of a huge continent called Gondwanaland which broke up and floated apart 65 million years ago.

“The west coast of Australia is now considered to have once been joined with India and Burma and possibly South Africa, the major world producer of diamonds — it depends on who is trying to juggle the pieces of the continental jigsaw together,” says Mosig.

“There was once a small discovery of alluvial diamonds south of the Kimberleys at a place called Nullagine but nobody has been able to find the kimberlite from which they came.”

“One geologist has conjectured that they were washed from a kimberlite that ended up as part of India when Gondwanaland broke apart.”

One of the areas of Australia considered most favorable for diamond search is the Kimberley district of W.A. where there are a number of intrusions of rock type related to kimberlites.

Mosig is to present a paper on his studies to an international conference on kimberlites to be held in Santa Fe, in the U.S., in September-October.

“The tests and the tables give us an objective means of identifying areas of strengths and weaknesses in children,” Jeanes says.

“If the tables show that a child has weaknesses in one or more areas, a physical education program can be devised to remedy the situation,” he says.

“At the start of my research, I would have liked to look at the performances of the clumsy child or those attending remedial gymnasia in Victoria.

“But this was not possible, because there were no normal data on physical performances generally.

“In fact, there was no objective research to show what a reasonable performance for an eight, nine or ten year old child was,” Jeanes says.

“A class room teacher says: ‘This boy is clumsy — he bumps into things, he’s always dropping things, he’s a shocking writer, he’s hopeless at ball skills and he’s overweight’,” says Jeanes.

“Often, children are referred for remedial treatment on this type of subjective judgment and reasoning.

“Moreover, this ‘clumsy’ labelling is based on opinions that vary from teacher to teacher.

“But if we are going to label children — and I wish we wouldn’t — then we should base the judgment on reliable research material,” he says.

“Using the study’s normed data, researchers, including myself, can now look at children in schools and special teaching institutions and see how their performances compare.

“If necessary, we can devise more specific education schemes to improve a particular child, rather than guessing or making stabs in the dark about the program we should be administering,” he says.

“By identifying problem areas, and teaching through success rather than failure, we can develop a child’s self confidence, which is often lacking if he is a poor physical performer.

“Often children do not involve themselves or tend to withdraw from play because they do not have the necessary skills to compete within their peer group, and so they have a poor self-concept of themselves physically.
Knowledge ‘bridge’ helps students cope

RECENT MONASH studies on learning theory could provide university science lecturers with clues on how to cope with first-year students handicapped by poor school science and mathematics backgrounds.

Researchers found that, for some types of learning, there is no need to give such students lengthy catch-up tuition.

Instead, they can often be taught to handle academic tasks for which they are not prepared by the forging of simple mental links, or “cognitive bridges”, to their general knowledge.

Dr. Leo West and Mrs. Natalie Kellett, of the University’s Higher Education Advisory and Research Unit, tested the technique on 209 Melbourne high school chemistry students.

Faced with tasks in an area of chemistry not normally taught until later in their schooling, students given this type of preparation performed equally as well as others given a solid grounding in the subject.

West says the type of learning investigated is very common in first-year science and mathematics, involving what are often misnamed “problems”.

“These abilities to do certain tasks are perhaps better called ‘intellectual skill’,” he explains. “The interest was not so much in the ability to do a specific intellectual skill that had been taught, but the ability to apply the learned intellectual skill to related but different tasks (what might be called ‘meaningful learning’ of the intellectual skill).

“The ability to ‘meaningfully learn’ such skills is thought to be related to the type of background knowledge already possessed by the learner. The results of this research not only support that view, but suggest teaching approaches that could be used to enable learners with no relevant background to improve their meaningful learning of skills — i.e. their ability to apply a learned skill to new situations,” he says.

‘Maths, science’ implications

The results have obvious implications in first-year university science and mathematics courses where the backgrounds of students are tending to be weaker than they used to be. If formal matriculation examinations are abandoned, they may be weaker still (or at least different but less relevant to university courses).

West says the research was carried out in secondary schools because it has been found that university students are reluctant to involve themselves in experiments of this kind — i.e. where the learning and teaching is not part of their normal course.

Since the experiment required students who were totally naive in content areas related to the skill, a skill from the sixth form chemistry course was taught to students in fifth form.

The skill was the ability to predict whether a precipitate would occur or not if two solutions of known concentration were mixed. The obviously related content area is “chemical equilibrium” as the skill in an example of this.

The researchers developed a learning program for teaching this type of skill without reference to chemical equilibrium (control program). In an alternative version (experimental program) they inserted materials designed to improve the meaningful learning of the skill.

They found that the programs were equally effective in teaching the skill (control program: 91% of students mastered the skill; experimental program: 92%). However, the students who completed the experimental program were superior on solving similar but previously unseen problems (out of eight quite difficult new problems the experimental group averaged 2.6 correct while the control group averaged 2.3) and the experimental group were less inclined to naively apply a learned set of rules. (The experimental group did this for, on average, 2.6 questions while the control group did it for 3.4 questions.) Both these differences were statistically significant.

In a replication of this study, a similar group of students were taught the principles of chemical equilibrium (i.e. important prerequisite learning) immediately prior to the study. On this occasion the performances of both groups were the same and were comparable to the experimental
group of the previous study (average number correct 3.1 for the experimental and 3.3 for the control; average number of naive applications of the rule set was 2.9 for the experimental and 2.7 for the control).

"It therefore appears that the approaches used in the first study to improve the meaningful learning of skills of this type are an effective substitute to the students to learn related content that would logically appear to be necessary background," says West.

Making mental 'learning' bridges

The materials used to effect meaningful learning are derived from a learning theory first proposed in 1968 by Professor David Ausubel, educational psychologist of the University of Chicago. They have been given various jargon names: advance organizers, external organisational aids, or cognitive bridges.

The latter, devised by Professor of Science Education Joe Novak at Cornell University, is perhaps the most descriptive, says West.

"When we learn in a meaningful way (according to Ausubel) we relate the new learning to our existing knowledge structure," he explains. "We use our existing knowledge to 'make sense' of the new learning.

"If a learner lacks appropriate prior knowledge then we need to alert him to use other parts of his knowledge that might also be effective in making sense of the new learning.

"As Novak sees it, we need to build 'cognitive' or 'mental' bridges between the new learning and something that does exist in a student's memory.

"In this study use was made of an analogy using an everyday non-chemical system, and of overviews of each new section (presented to the student immediately prior to the section) and continuous reminders of where each new section fitted into the general overview."

Aboriginal centre fund

MONASH UNIVERSITY has established a memorial fund to commemorate the work of Dr Elizabeth Eggleston, a former director of the University's Centre for Research into Aboriginal Affairs, who died last year.

The fund will help establish an Aboriginal resource centre at the University.

The nucleus of the Resource Centre will be Dr Eggleston's collection of books, pamphlets, papers and other materials, which she left to the Centre.

It is proposed that funds will be used to buy material and to engage librarians, research workers and archivists as resource personnel.

An appeal is also being made for donations of additional material covering the whole spectrum of Aboriginal affairs.

The chairman of the Board of the Centre for Research into Aboriginal Affairs, Professor Louis Waller, Sir Leo Cussen Professor of Law, says that the initial cost of establishing the resource centre, with a minimum provision for staffing, is $25,000.

The University Council, which approved the appeal earlier this year, has now invited donations from persons interested in the work of the Centre and who wish to commemorate Dr Eggleston's work.

Many people with whom Dr Eggleston had contact in other organisations have already said they wish to contribute and it's hoped that members of the legal profession, anthropologists, social workers and secondary school teachers, members of the public and others whose work is concerned with Aboriginal people, and members of Aboriginal communities, will also respond.

The resource centre will contain all manner of material, including books, films, papers, and aural recordings — "everything upon which information and expressions of opinion can be recorded," Waller says.

An accurate bibliography of the material will be prepared and circulated to other libraries and potential users of the information, such as anthropologists and social workers, thus encouraging the centre's use as a research base.

With this in view, it is envisaged that staff will take material out for display to interested groups — either by invitation, or to act as "missionaries" offering themselves and the use of the material to schools, colleges and other audiences.

A good deal of the information held at the resource centre will be coded and held in computers, enabling speedy recovery of information. In physical terms, there are advantages in computer information storage because much of the material is rare, and it would otherwise be impossible to make it available to all who want to use it.

"One of our chief aims is to make the material known to, and used by, Aboriginal people themselves," Waller says.

In a personal tribute to Dr Eggleston, Waller says that at the time of her death in March last year, she had come to be acknowledged as Australia's foremost expert on Aborigines and the law.

"Dr Eggleston was a leading figure in the establishment, in 1972, of the Victorian Aboriginal Legal Service. She worked for what she constantly underscored in her writings: the removal of those burdens and barriers which clothe Aborigines with a lesser status than other, larger groups in Australian society.

• The illustration is from a print in Dr Eggleston's collection drawn by Tommy Barnes (c. 1860), member of an Upper Murray tribe. Reproduction courtesy La Trobe Collection, State Library of Victoria.

Come to Monash Open Day, 1977

VISITORS TO Monash University on Open Day, Saturday, August 6, will have an opportunity to discuss many of the university's research projects with the personnel carrying them out.

The university campus will be open between 10 a.m. and 5 p.m. During this time, a wide range of Monash activities will be on display.

This year, emphasis will be placed on providing opportunities for prospective students, parents and teachers to meet academic staff at Monash.

In addition, a team of counsellors will be available to assist with the problems students face at university, such as the choice of faculty, adjustment to university life, the availability of financial assistance, accommodation and employment prospects.

Despite inclement weather, more than 20,000 people visited Monash for Open Day last year.