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ABSTRACT
                Seven articles on higher education in Australia are
presented, along with two review articles. "Operation
Bootstrap--Reflections of a Staff Developer" (Colin Flood Page)
offers views on various aspects of college learning and teaching.
Findings of a study on student learning through essay-writing are
presented in "Essay Planning and Essay Writing" (Dai Hounsell).
Factors perceived as affecting learning of second-year college
students are reported in "Student Perceptions of Factors Influencing
Tertiary Learning" (David Watkins). Student forecasts concerning the
future of Australian higher education in the 1980s and 1990s are
discussed in "The Future of Higher Education in Australia: Ten Years
On" (Terry Hore, Leo H.T. West). Another research report, "The Age
Factor in the Prediction of Tertiary Academic Success" (Sun-Mook
Hong), considers the predictive power of age in the achievement of
behavioral science students. A study of factors involved in the joint
development of courses by universities is described in "Collaboration
Between Two Universities in Course Development" (G. Gillard and S.
Kemmis). Finally, a study in which self-study questions were inserted
in the text of lecture notes for external students is discussed in
"In-Text Questions: A Note on an Experiment in Instructional Design"
(Bronwyn Richardson). (SW)

3

HIGHER EDUCATION RESEARCH & DEVELOPMENT
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5

Editorial Consultants

Operation Bootstrap
— Reflections of a Staff Developer

Colin Flood Page
Aston University

ABSTRACT

This article considers, from the point of view of an experienced staff developer, several aspects of tertiary education. It touches on the question of whether teachers are born and not made; some reasons for refusing to learn about learning; the continuing grip of the Middle Ages; the possibility of reorganisation so that students are dealt with as individuals and not in batches; the magic force of numbers; amateurs versus professionals in teaching and research; subject cultures; and the unique and parlous situation of many staff developers.

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Staff-development is still, I'm afraid to say, a bit of a dirty word in some quarters and not always well understood. I interpret it as meaning the process of helping academic staff to become better at their work, particularly teaching, which is generally reckoned to be their chief concern. Historically, this is a process which has been almost entirely neglected. It has been assumed that teaching at this rarified level is something that anyone can do; it is only recently that serious efforts, and not so serious, hav, been made to correct this erroneous superstition. We are still a long way from having the expert teaching force that tertiary education needs, but I count myself fortunate to have played some small part in the process of upgrading, ever since I entered tertiary education as a teacher at the early age of 46. I have enjoyed the job enormously, but how much of the enjoyment is inherent in the job and how much is my own natural delight in life others will have to judge. All human occupations have their share of frustrations and disappointments to balance the pleasures: it's a question of which way the scales tip. Two hundred and fifty years ago Alexander Pope described the human race as "the glory, jest and riddle of the world". If you like jests and riddles (as I do) academia provides a rich spread, with perhaps just a hint of glory from time to time - enough to maintain hope when looking for pennyworths of gold in a mountain of forbidding ore. In this rambling and not entirely consistent article I should like to try and say something about some of the riddles which most appeal to me. It's not that I have any answers, but I love mulling over the questions. Some of them are closely connected with staff development; others have only a tenuous link; but all affect in one degree or another the possibilities of improving the quality of higher education, which is the heart of the matter.

One awkwardness about many of the things I want to discuss is that the terminology of education is in such a confused state, and this is not helpful to precise thinking about the kind of matters that interest one. There is nothing surprising about this. It is normal in human affairs for abstract terms to be vague - if they weren't philosophers would be out of a job - but as higher education is devoted to enhancing and clarifying peoples' powers of thought it is a pity that its practitioners don't put their own house a little more in order first. I shall probably revert to this difficulty more than once; and there are advantages as well as disadvantages in imprecision of language. (Theology and literature, for instance, depend on it.) Nevertheless, it is hard to make good progress in any desired direction when the words that one has to use are so slippery that interested parties can spend for ever agreeing on the surface but disagreeing fundamentally because they mean different things by the same terms. Try for instance, to define standards, excellence, discipline, or even "tutorial", let alone "staff development". I'm never happy with this term, though I don't really know a better. At one time I wanted to call myself a Teaching Advisory Officer, so that I could put TAO on my office door and my notepaper. It seemed to me to have the right overtones of indeterminacy and profundity; but no one else seemed to like the idea. Others have, of course, tried their hand with turks and teddies and similar upstart creatures.

And what about "higher education" itself? I'm a bit chary about using the term, because it implies value judgments which are rarely acknowledged and gets mixed up with notions of prestige and holier-than-thou attitudes which I don't find helpful. Along with quite a number of (sensible) people I prefer to use the term "tertiary" for all post-secondary education. Let those who will argue about which bits of the current diversity are in some sense higher. It's like trying to sort out hills and mountains: it's better to enjoy them than to fuss about divisive definitions. In any case the foothills of the

Himalayas are higher than the mountains of Scotland - though quite where that gets us I'm not sure.

Among the topics which I frequently meditate on are those connected with the structures of tertiary education; amateurs versus professionals in teaching and research; the magic of time and numbers; the stranglehold of the Middle Ages; the variety of subject cultures; the belief that teachers are born and not made; the concept of a university; private intelligence and public stupidity. There are quite a number of others that one could put on the table but these will be enough to go on with. We will explore a few.

Let us start with one that most nearly concerns staff developers: the belief that teachers are born and not made. It's a notion that I've encountered from many people in many walks of life. To some extent it is true, as it is in all occupations. Some people are naturally gifted with just the right blend of talents to shine in a particular job without much effort; but, of course, this does not mean that they have nothing to learn, nor does it signify that nobody but this chosen few can be successful in that line. Among teachers in tertiary education this belief shows itself in a great unwillingness on the part of many to learn about how people actually learn. When you ponder on this state of affairs its oddity becomes increasingly stark. Here you have a group of highly intelligent people engaged in a tricky and responsible operation, and a large proportion of them resolutely refuse all attempts to assist them in understanding this intriguing and demanding process. They know, without study or preparation, how to teach; and many regard any suggestion of training for the job as little short of an insult (something only necessary for mere school-teachers); yet it is reasonable to suggest that to be a good teacher is a more difficult job than to be a good doctor or architect or lawyer, to make but a few valid comparisons. Doctors, architects, lawyers, may all have some youthful inclination towards their future occupation, may even have something strong enough to be called a vocation, but they do not therefore scorn the idea of preparation or training. They may disagree about the details, but they usually submit to their schooling with a reasonable grace, and a lot even enjoy it. Why tertiary teachers stand out like sore thumbs in this respect is to me a mystery; though I can tentatively suggest a few of the factors which need taking into the analysis of this fascinating situation.

Factor number one: obsession with subject matter. Most of us who teach in tertiary education have achieved a large part of our success by imbibing and regurgitating masses of facts in a number of examinations. Numerous researches have shown the dominance of subject matter in these hurdle races at which we're so adept. It is not therefore surprising that content rather than presentation should seem all important. But it is strange, isn't it? It is as though doctors should acquire large quantities of drugs, and unload them on their patients without regard to dosage, injection procedures, side-effects or contra-indications. Most of us would rightly fight shy of medics whose technique was so ill-informed. We wouldn't want to let them get away with murder, whether intentional or accidental; but pcychological slaughter by comparably ill-equipped academics is regarded as not worthy of comment. It happens all the time, and hardly anybody gives it a thought, except some puzzled and suffering students. The problem is compounded in those science subjects where the knowledge explosion is achieving its highest momentum. Here many teachers feel they can only keep their heads above water, or even remotely close to the surface, by passing on to their students as much as possible of the overwhelming mass as rapidly as possible, more often in an undigested fashion than otherwise. This state of affairs is quite comprehen-

sible, only too human and perverse; but sad, very sad.   It could be so much
improved if the teachers understood better what they were doing and acted on
that understanding.   I wonder why they don't?

A second factor that predisposes academics to avoid knowledge of teaching is
that well known bogey of the human race: time.   In the way that education is
organised in modern society (and it could be done quite otherwise) conscien-
tious teaching is a 25-hour a day job.   To know one's subject adequately, to
do all the necessary preparation and marking, to set examinations, to give due
attention to the difficulties of individual students when you encounter them
in batches of any number from 5 to 500: all these thin~s (and others) add up
to a formidable time-demand.   If in addition you are t.ying to study for a
higher degree, or write a text-book, or pursue some research, or even keep
abreast of knowledge in your subject something has to go.   Staff developers
may say, quite reasonably, that more attention to good teaching technique and
to the better organisation of learning would pay off in savings of time and
energy; but few academics regard this argument as convincing.   The daily
pressures don't leave time for such luxuries as thinking about the job.

And there is a third factor, closely tied in with number two, which enables us
academics to continue in our uninformed ways.   If we have the hard job of
trying to teach handicapped people, or boisterous anti-school adolescents, or
similar groups, we have to have a good technique, or we fail entirely.   The
more intelligent and the more motivated students are the less it matters how
we teach them: they will get something out of it and compensate for our
deficiencies or ignore us altogether.   So universities, which normally get
the pick of the academic bunch, are usually less concerned to study teaching
than are those less favoured institutions which do not get so much of the
cream.   Universities will claim that this is not so, that they do have a
strong interest in good teaching; but when you observe how little this seems
to mean in practice it makes you wonder what they actually understand by
teaching and what concrete steps they propose by which to judge it and reward
it.   Between the word and the action a great gulf is fixed.

I have sketched out three factors which account for some of the resistance to
the idea of learning about teaching; but I don't pretend that this is the
whole story; and I do not want to paint the picture blacker than it is.   As
I suggested earlier the more selective tertiary education establishments tend
to pay the least attention to good practice, while at the same time they make
the grandest claims to divine inspiration, reflecting the long history of
European universities' close association with the church.   Even here, however,
the scene is not without hope.   My own guess (more research needed) is that
in universities some 10% of academics have a thoroughly professional approach
to teaching, while another 10% have an interest in such matters but do nothing
much about it.   The rest put such ideas to one side and get on with teaching
as it's always been done.   In the less selective places more attention is
paid to the business, partly because there tends to be less emphasis on the
bugbear of research; and while the staff development movement is still small
it is growing (I think) and might one day take its rightful place in well run
tertiary education.   Such progress does depend on change in quite a number
of other factors; and the ponderous leviathan is loath to alter its habits
and its patterns.   Let us consider a few more of these.

One of the topics I mentioned earlier was the continuing influence of the
Middle Ages.   All sociologists are well aware of the conservative nature of
human institutions, but technological and economic pressures have forced
changes on quite a number of time-hallowed structures and practices in most

walks of life.   It is interesting that academia, which numbers in its ranks
some exceptionally innovative and iconoclastic individuals should <u>collectively</u>
cling so strongly to the outworn habits, justified (if at all) only by
tradition.   The habit of breaking the year up into terms or semesters is one
of these.   Three terms a year and the long vacation date back to the days,
hundreds of years ago, when students and teachers might take months to travel
from one university to another and quite a number probably needed time off to
help with the harvest.   Isn't it time that someone studied the question as to
what is actually the best way to allocate time in tertiary education?   It may
be that, by accident (or divine inspiration), the present arrangements of work
and holidays are ideal; but if research shows that this is not the case it
might be a good thing if such temporal divisions were altered.   I'm aware that
such suggestions raise howls of anguish among us teachers; but then the system
isn't actually supposed to be run for our benefit.   Or is it?

Another aspect of ye olden dayes which still has a strong grip is ye lecture.
In mediaeval times books were scarce and students, reasonably, had to look to
their teachers to read and expound them.   Today the means of knowledge trans-
mission are numerous, and the human variety is not of such a consistently high
quality as other available channels; but both teachers and students tend to
cling to lectures.   A dispassionate observer would probably conclude that the
important element in this practice is the ritual: all those present feel that
they are taking part in something meaningful and comforting.   Anything uttered
by the oracle, however obscure, has a value and an authority which other means
of communication lack.   Degree ceremonies and similar occasions bestow the
same sort of mana on the participants: the outward and visible sign of the
much sought inward and spiritual grace (or qualification).   There are obvious
links here with those rites of passage or initiation ceremonies which have
such a long history and have played so large a part in human society.   It is
the symbolic nature of the happenings which is the most important; and as
such events are not as plentiful in modern society as one might wish for every-
body's psychological health perhaps it is a good thing that tertiary education
retains them in good measure.   But the situation needs looking into - has any
one conducted a thorough investigation into the significance of ritual in
tertiary education?   I once had a student who was going to attempt this for
secondary education, but as with so many social scientists, he never completed
his project.   Perhaps it's a good subject for a percipient staff-developer to
look at.

I mentioned earlier that teaching tends to be an overloaded occupation in our
society for any one who takes it seriously.   It's worth thinking whether some
different arrangements could improve things.   Could the structures of tertiary
education be so altered as to make the job more manageable?   I have a dream
(with no disrespect to Martin Luther King) of another kind of society in which
medics and academics more or less change places.   If you want health you go
along in groups of 40 or 50 to underfunded individuals who lecture at you.
You have a bad cold this morning and need a cure for it; but if the lecturer
has reached broken legs in his syllabus then broken legs you have to have.
On the other hand if you want education you make a date (often difficult to
get) with a superior consultant in his elegant and comfortable office, get a
prescription as to what you are to do or take, and get on with it.   Or perhaps
you have to face the fact that the prognosis is bad and that you are a hope-
less, terminal case.   The analogy is not all that exact, and I won't take it
any further, though all my readers are at liberty to do so.   It is, however,
easy to see that such a set up would produce quite different kinds of teachers,
who might be able to do their job with greater efficiency and greater rewards
both materially and psychologically.

On a slightly different medical tack it is worth remembering that two hundred
years ago if you went to a doctor, with any complaint whatsoever, the chances
are that he (it was always a he) would take blood out of you, frequently in
massive quantities.   Today it is much more likely that, should the case
warrant it, you would be given blood.   Perhaps our present educational set up
is equally doing things entirely the wrong way round.   Staff-developers please
ponder.   One point of the comparison is that in medicine people are treated
as individuals, while in education, though the primacy of the individual
learner is often proclaimed, the actual structure of the system is geared to
batch processing.   Perhaps this is one major reason for a lot of the dissatis-
faction which surfaces from time to time.   Teachers themselves are more than
keen to emphasise their own individualities, and it is right that they should;
but it's a pity if their needs are met at the expense of the individualities
of the students.   Particularly today, when modern technology makes it much
easier to adapt learning structures to people, rather than the other way round,
it seems a sad thing that old habits and casts of mind die so hard.   One can
envisage a quite different pattern, where the procrustean course, the hard-
shell institution, and the vice-like examination have all lost their grip.   I
am not the only one to think that what we need to revive tertiary education is
to create quite new institutions.   I toy with the idea of places o: nised on
vertical rather than horizontal lines, which might be particularly a, ropriate
in scientific and engineering subjects.   Such colleges would permit indivi-
duals to join and quit them at any level.   Instead of uninformative, classi-
ficatory certificates, leaving documents would detail precisely what the
individuals had studied and what they could be expected to do.   Mediaeval
time divisions would be abolished: the places would be open all day and every
day, so that they were adapted to the maximum convenience of those who wanted
to use them.   Each college would have a teaching division, a research and
development division, and an information division in its own small range of
subjects.   I won't pursue the topic in more detail here;   but once again it's
one that my successors in staff development might consider.

This question of giving full attention to the vital individual needs, capa-
bilities, and time patterns of students rather than to the rigid exo-skeleton
of the course and the institution does seem to me the ultimate goal to which
all our staff development efforts should be directed.   Even within the present
set up a lot of progress can be made in this direction if the good will is
there, but though I'm an optimist, I am also a geologist, and my time scale is
perhaps different from that of some of my colleagues.   Shall we think in
scores, hundreds, thousands, or millions of years?   The choice is yours.   On
the medical analogy I think hundreds is reasonable and scores is possible.
Having thus roused the numeracy hackles in my readers I would like to consider
in a little more detail the topic I mentioned earlier of the magic of time and
numbers.   I have already alluded to the mediaeval pattern of terms or semes-
ters which still has such a strong grip;   but this is not the only case in
which arbitrary numbers are allowed to dominate thinking about tertiary
education.   I suppose, once again, that the unwillingness to tamper with
sacred figures has a long history, going back before written records to the
remote biological past.   Even in academia, outside science and engineering,
it is common to hear the deprecatory boast: "Of course, I was never any good
at maths".   There is no doubt that the conscious human mind does not take
kindly to anything beyond simple arithmetic, whereas our subconscious minds
are excellent mathematicians.   So, once certain figures are established in
the academic pattern they acquire an irrational fixity, a supernatural
authority.

In Great Britain, partly as a consequence of the Leverhulme report (Williams

and Blackstone, 1983), there is some debate about introducing two year as
distinct from three year degrees.   As far as I am concerned this is a non-
debate.   May I suggest (traumatic thought) that tertiary education should be
concerned with quality of intellectual performance and not quantities of days?
We all know that degrees vary greatly as to what they signify between different
institutions and different subjects: about the only thing they have in common
is the time they take, which is arbitrary and unrelated to the known diverse
learning rates of students.   Yet the British Association of University
Teachers got quite huffy about the mere idea that any one should consider
changing the sacred time limits.   Likewise there has been a great puffing and
panting about the completion rates of doctorates, with the British government
taking up its customary punitive stance and standing economic whip in hand
above those who don't finish in three years.   Of all intellectual endeavours
it is doctorates, above all, in which quality should be the watchword, other-
wise what do they mean?   I won't pursue this numerical hare any further now,
but I would recommend staff developers to put it in their hunting calendars.
If you insist on time being a constant in tertiary education quality is bound
to vary.   I would rather make the quality higher and more constant and allow
time to vary.   I was pleased to notice some recent figures suggesting a
strong, if unplanned movement in the United States in that direction, and in
parts of the continent of Europe it has been acceptable for a long time.
The economics of it may be tricky, but that is another debate.

Amateurs versus professionals is another of the mulloversome topics I mentioned
earlier.   There is a British tradition, despised by the French, of pragmatism,
muddling through, amateurism, and the old boy net.   Tertiary education in
several countries certainly sits well within this tradition, and not only in
the English-speaking world.   In some countries things go on in the name of
higher education that evince a degree of laxity and silliness that would
hardly be credited even in an Evelyn Waugh novel.   But does it matter?   It
is not as though tertiary education is a finely geared system of social
engineering, with everything dove-tailing neatly to fractions of a millimetre.
On the contrary, it is a pleasantly human mush incorporating all kinds of
slack and doubtful connections, which, so far as I can judge from surveys,
most of its participants find quite satisfactory, and a lot enjoy hugely.
Would it be a good idea to make the whole thing more precise and professional,
more on the pattern of a modern high tech factory?   Certainly a lot of ideas
of industrial techniques, methods and organisations have been pushed onto
academia in this century: some have been adopted but most have been resisted.
In particular, whereas industry has commonly tried to divide its operations on
the basis of one man one job, academia strongly favours people trying to do
several things at once in good old handiwork fashion.   Teaching, research,
administration, reading, writing: everyone must do all of them.   In some
ways, this style gives great satisfaction, and there are a few superhuman
people who can actually do all the necessary things extremely well; but such
individuals are inevitably a small minority, and it is not good practice (or
is it?) to run a whole system on the notion that everyone can do what these
few can do.   We discussed earlier the resistance to learning about learning,
and this naturally implies an amateurish approach to academia's main concern
-- teaching.   The operation is geared more towards the needs, even the
enjoyment, of the teachers than to anything else.   As in any other amateur
sport there is a certain competitive edge and some fine players here and
there; but is there any call for the strict discipline and the rigorous
training of the professional to encourage all to a higher standard?

Research is, of course, the other matter which most centrally concerns
academics, particularly those in the higher reaches, and without entering into

my favourite topic of the relationship between teaching and research, it is
nevertheless worth asking the question as to how professional research in
tertiary education can be or should be?   When I refer to teachers or resear-
chers as professional I imply that they go about their activity with full
knowledge of the appropriate techniques involved, fully able to account for
whatever they are doing, and prepared to justify their actions and results in
a measured, rational fashion to their peers.   Some kind of training is also
usually implied.   On these criteria, I think it is reasonable to conclude
that most attempts at research in tertiary education are more professional
than attempts at teaching.   A large number of academics have received some
sort of training as research assistants, know what standards should be
observed in trying to operate a research project, and are usually prepared to
submit their results to peer review and, if possible, publication.   This is
quite different from the situation vis-a-vis teaching, where only a minority,
as was suggested earlier, have developed this kind of ethos.   As always, and
as we shall discuss shortly, this statement doesn't apply to all subjects:
in some of them there is an unfortunate tendency for would-be researchers to
start out blithely to re-invent blunt tools time and time again, often because
of an amateur unwillingness to find out what has been done already.

Though there is this difference in approach to the two major activities it
doesn't necessarily mean that there is all that much difference in practice,
because of the time pressure which we mentioned earlier.   With the best will
in the world, when you are trying with inadequate resources in the real world
to do two disparate jobs (and probably several others at the same time, as
mentioned before) it is unlikely that you will be able to do either to the
highest level.   The result is bound to be a certain degree of amateurish lack
of finish, which will show itself in various ways, and leave individual
academics dissatisfied with what they haven't quite done to the best of their
ability.   Mind you, there is a positive side to this: some might call it
productive tension, others might opt for the term benign chaos;   but because
of the loose ends and the unfinished business plucking at one's mind-strings
there are always new possibilities of growth and development, while thorough-
going professionalism, too well organised, can have an ultimately deadening
effect on many people.   My lords and ladies of the jury: the question rests
in your hands, fruitful may your deliberations be.

One last topic before we try to put some sort of capping on this pool of
ponderings.   The longer I study tertiary education the more I am struck by
the large differences between subject cultures.   (I avoid the word "discip-
line" because I fear it is one of those numerous terms that have become
misused and overused to the point of unhelpfulness.)   We tend to have far too
many boards and committees in tertiary education, and one reason for this pro-
liferation, which almost everybody deplores, is, I am sure, the diversity of
needs and behaviour as between different subjects.   It is as though a factory
re trying to make cheshire cheese, hobnailed boots, and videotapes all on
he same machines: it would require a lot of negotiation and some most extra-
ordinary gadgets, and even then one could predict a lot of friction.   One of
the myths of tertiary education is that it is a good thing to have this great
range of different subjects in the same college because of the fruitful mixing
of individuals.   As one of the fruitful mixers myself, and with knowledge of
a little American research on the subject, I think one can truthfully say that
most people prefer to stay in their tight little subject groups, and feel
lonely if they don't have one to home in on.

Again, this is understandable, since a majority of academics have climbed
increasingly narrow tramlines (fruitfully mixed metaphor?) to reach their

present position and feel most secure and happy within their narrow bounds
(perhaps this is what fundamental particalists would call a "gauge" theory?),
where their expertise is sure of recognition.   These tight divisions and
strong dividing walls do raise considerable difficulties for us staff-
developers.   We know, on simple grounds, that there are many teaching princi-
ples and techniques which are common to all subjects; but the cry "No one can
teach me how to teach who doesn't know my subject" frequently echoes through
the corridors of erudition as one line of defence against improvement.
Certainly there are great divergencies between, shall we say, English litera-
ture and nuclear physics, but all subjects consist of some combination of
these elements (philosophers keep away): facts, skills, and concepts; and
one can try to be helpful on all these.   It is only the mix which differs.
Perhaps we would be better off, as suggested earlier, with a narrower range of
subjects in individual colleges, so that facilities such as libraries and
laboratories could be more specialised and better equipped and less time spent
trying to weigh the relative merits of boots and cheese.   Most academics
claim to dislike administration, and this might be one way of reducing the
load.   I only say "might".

By now, if you have wandered with me this far, you may be wondering where my
title comes in.   It refers to the extraordinary situation that a large pro-
portion of us staff-developers find ourselves in.   We sit in the margin of
academia, full of good intentions, and with no small supply of useful tech-
niques and information, keen to raise the professional standards of the busy
people around us.   Powerful bodies have put us in place and assured us we are
needed; but our glorious birth sometimes only preludes a desultory and
neglected way of life, accompanied by the uneasy feeling that we may one day
be abruptly plunged into another world before we are ready for it.   I know of
no other comparable occupation group (as with "discipline" I avoid that
misused word "profession") which has set out to improve its competence in its
major task by appointing a small number, an almost vanishingly small number in
some cases, of non-executive individuals to haul its members up by their boot-
straps, people with no power to order, usually few resources, and sometimes
with little good will from their colleagues.   We are put in position like a
forlorn hope, told not to fire till we see the whites of their eyes, and left
to get on with it; perhaps with a more-or-less benevolent committee hovering
like a protective halo round our aging pates.   The situation (another misused
word) is unique; and for those of us loners who like challenge, uncertainty,
tight-rope walking, and the art of ricochet it is quite delightful; but have
we much to show for our efforts and the plans of those who put us in our gun
emplacements?   The staff-development movement has been gathering (and
occasionally losing) force for getting on for 20 years.   Has the yeast begun
to work?   Have the productivity graphs begun to turn upward to any significant
degree: and, if so, along what parameters?   As I suggested before, I think
there is hope, though whether one looks westward, north, south or east for the
bright land I'm not sure.   If tertiary teaching is going to improve, is this
the best way to go about it?   However gastropodally slow the progress of
staff development may be we have at least the great pleasure of working with
gifted people.   Like all teachers we gain our satisfactions from the
occasional light of intellectual illumination as it dawns in a willing student
or two, from the mental tingle that accompanies a vigorous seminar, and from
similar real though insubstantial feelings.   I have said little about the
glories in this essay; but they are there.   We do not trail them in clouds,
nor have we intimations of any great immortality, but we are close to the
human effort that wrestles with, again a much maligned word, "truth".   That
is a great bonus and compensates amply for much of the neglect that is
suffered by our offered courses and ministrations.   There is real value here.

We enjoy working with the cream, even though some of it is sour, and quite a lot seems unduly clotted at times. In most human jobs people have to make do with the skimmest of skim milk, which is not so appetising.

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Essay Planning and Essay Writing

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ABSTRACT

Undergraduate students are commonly advised to make plans of their essays before they begin writing, yet there is little empirical evidence on the nature, role or efficacy of essay planning. This paper examines findings from a recent study of coursework essay-writing as an aspect of student learning in the social sciences. A total of 16 Psychology and 17 History students took part in the investigation, which mainly took the form of two sets of semi-structured interviews. From an analysis of the interview transcripts, five planning strategies were identified. However, it was apparent that to gain a full understanding of the nature of planning, it was necessary to examine these strategies in the light of the main findings of the study — a qualitative analysis of differences in the students' conceptions of what an essay was and what essay-writing involved. In sum, what seemed important was less how a student planned than what planning was directed towards.

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Within the canons of advice-giving to students, the injunction to 'make a plan before you write' occupies a position of prominence. It is a firmly established part of what McNamara and Desforges (1978) have called the 'craft knowledge' of teachers, and it is widely propounded in most study skills manuals, (Hartley, 1983), where it can be seen as mirroring a more general advocacy of planning and self-organisation as the most secure avenue to academic success.

Yet this ostensible consensus has not gone entirely unchallenged. One Schools Council monograph (Britton et al. 1975) has questioned whether planning need be an invariable concomitant of accomplished writing, while Gibbs (1981), in outlining a rationale for a fresh approach to learning-to-learn activities, has suggested that the plan can prove an unwelcome straitjacket which may hinder rather than help students to write their essays. For Gibbs the nub of the problem is the way in which students perceive planning, which in reality is often informal and messy:

> Clearly the lack of any planning at all can be disastrous, but very formal
> planning can also be disruptive and unhelpful. When advice over-formalizes
> what is normally an informal process it can become impossible to follow.
> (p.66)

Most strikingly of all, in Writing without Teachers Elbow (1973) has argued for a writing strategy which is founded upon extensive drafting and redrafting rather than the advance plan. The aim is to begin in an as open and unfettered way as possible, successively summarising and redrafting to coax forth an incipient centre of gravity. For Elbow, meaning is 'not what you start with but what you end up with' (p.15). Writing must therefore be treated as holistic rather than as exclusively linear:

> Not starting in at one end and writing till you get to the other; but
> rather as successive sketches of the same picture - the first sketches
> very rough and vague - each one getting clearer, more detailed, more
> accurate, and better organised as well. (p.29)

These challenges to the hegemony of the plan can be viewed as a debate over alternative means to the same end - that is, towards writing which coheres. Where the means is planning, organisation precedes articulation; where it is drafting - redrafting, these steps are reversed. But each approach is pre-dicated upon a division of labour between what Galbraith (1980) identifies as a major source of difficulty in writing: the reconciliation of the opposing tensions between topic and goal, content and form, or expression and presen-tation.

What the debate has lacked, however, is empirical evidence on the nature of essay planning, its role within essay-writing, and its efficacy. Perhaps the only exception is a series of studies, largely unpublished, of undergraduate essay-writing at the University of Keele (Hartley, 1983). These studies showed that approximately two-thirds of the students surveyed claimed to plan their essays in advance. As far as examination essays were concerned, however, there were no striking differences between the performance of those who had planned their answers and those who had not.

The aim of the present paper is to cast further empirical light on this dark corner of studying in higher education. The findings discussed stem from an investigation of coursework essay-writing as an aspect of student learning in the social sciences.

LEARNING AND ESSAY—WRITING

Since the mid-1970s, there has been a growing number of studies of learning in
higher education (see for example, Entwistle and Hounsell, 1975; Hounsell and
Entwistle, 1979; Marton, Hounsell and Entwistle, in press). Although these
studies have been concerned with learning activities, such as academic reading,
which had hitherto received little attention, this embryonic research domain is
distinguished as much by the methodology which underpins it as by the activities
upon which investigations have been focussed. Central to this methodology is,
firstly, an 'experiential' perspective. The overriding concern is with an
understanding of learning as it is experienced by students themselves. Students'
experiences must be explored and discovered in as open a way as possible,
avoiding a priori categorisations and predetermined conceptual frameworks.
Secondly, the content of learning is not taken for granted, but considered as
crucial in itself. Research has thus been directed towards the sophisticated
and demanding subject-matter characteristic of undergraduate education.
Thirdly, and in pursuit of ecological validity, investigations are conducted
within the actual setting of a real-life course of study or, alternatively,
within a naturalistic setting, i.e. an experimental setting the features of
which in many respects mirror those of the natural setting. Fourthly, a
fundamental aim is not to measure or explain but rather to understand learning,
through the description of empirically derived qualitative differences. The
research approaches adopted have therefore typically (though not exclusively)
involved in-depth studies of relatively small groups of students.

The research described here was undertaken within that emerging experiential
tradition. It was an attempt to explore undergraduate essay-writing in the
social sciences as a learning activity. Two groups of second-year university
students were involved in the investigation: 16 Psychology and 17 History
students. Each group was studied in relation to a specific course-unit within
the subject concerned, which itself constituted the main or joint main subject
within the two groups of students' respective schemes of study. The students
took part in two sets of semi-structured interviews, separated by an interval
of approximately a term. Each set of interviews was timed so as to take place
immediately or shortly after the submission of an essay within the course unit
concerned. The students were invited to describe both the content of the essay
and how they went about preparing it, to draw comparisons and contrasts with
other essays written for the course unit concerned, and to discuss various
aspects of the activity of essay-writing and the course setting within which it
took place. The students were invited to bring to the interviews copies of
their essays and other associated notes and materials. The interviews were
then transcribed and subjected to intensive content analysis. The main
differences identified were in the students' conceptions of what an essay was
and what essay-writing involved, and these conceptions were further explored
in relation to a selection of the students' essays. The analysis, however,
also encompassed the two course contexts and the steps followed by the students –
including their planning strategies – in going about their essays. The
discussion which follows begins with an examination of planning strategies and
goes on to seek to show that these cannot be adequately understood in isolation
from the students' conceptions of essay-writing. The two course settings are
not described here except insofar as this is necessary to the discussion.

FIVE PLANNING STRATEGIES

There were many respects in which the essay-writing practices of the History and the Psychology students differed, over and above differences which arose from the particular concerns of the respective disciplines. The History students, for example, were experienced and prolific essay-writers, required to submit as many as twenty essays of approximately 3,000 words during their second year. The Psychology students, by contrast, were sometimes unaccustomed to writing substantial essays, which formed only a part of their assignment workload. Similarly, while the History students tended to be given quite specific guidance about which books or articles they might use as the basis for their essays, the Psychology students were often expected to go beyond recommended texts and forage amongst library holdings in search of appropriate sources.

Despite these and many other differences, however, the essay-writing procedures of the two subject groups followed broadly similar patterns. The main initial phase was reading and note-taking, followed by (for some of the students) the preparation of an essay plan. The final phase was drafting and (again, only for some of the students) redrafting. Across both groups of students, five planning strategies were identified. These strategies can be termed No Plan; The Inventory; The Basic Plan; The Extended Plan; and The Evolving Plan. They represent the strategy that the student concerned usually adopted, although some students, as is noted below, did not always follow the same planning strategy. In the interests of anonymity, all the students have been given fictitious names.

No Plan

Two of the Psychology and two of the History students do not normally draw up an essay plan. For one History student, Brenda, this seems less the product of a conscious decision than an almost fatalistic attitude to essay-writing.

> I never do plans for any of my essays. They just happen.

Although Brenda does not make a plan, she 'might jot down thoughts to return to later as I'm writing' and she tries to start her essays 'with a quote that gets right down to the middle of the question. Then you can focus your ideas around that'. Brenda sometimes tries to write the essay in a single draft, but usually writes a rough draft followed by what many students call a 'clean copy' (that is a draft which is not replete with crossings-out and in which misspellings or grammatical mistakes have been corrected).

For another History student, Rick, his capacity to put pen to paper is fickle. An essay 'either comes or it doesn't', and he does not feel he could stick to a plan even if he were to make one. Before he begins writing, he tries to work out in his head what he will say, but consults his notes only to check factual details. And having completed the first draft, he then redrafts 'about eight times, normally', since he finds it difficult to express what he wants to say clearly and accurately.

Barry, a Psychology student, concedes that his planning is perhaps 'a bit weak', but he does try to map out the essay in his head and sees note-taking as the most difficult of the steps in writing an essay because 'it's then that you're planning your structure, in a way'. Nonetheless he sees little point in a

written plan since 'if you can't do it in your head, you can't make a plan either'.

Wendy, another Psychology student who does not make a plan, seems to use the rough draft as a device for honing and ordering the essay:

> I usually make about 14 sides of notes, for an essay like this. Then I go through my notes, crossing out all the bits which appeared to me irrelevant, then I write the essay out in rough, and, uh, alter it, asterisks everywhere, arrows and things, and then write it in neat.

She may sometimes make use of a plan, in which case it takes the form of an 'inventory' (see below), providing starting-points rather than the blueprint for the essay:

> Just write down a few ideas, and then sort of, as you get into the essay you think, oh yeah, that can go in, that can go in as well.

As this brief sketch demonstrates, the reasons for not drawing up a written plan are not homogeneous and may reflect, on the one hand, a view of essay-writing as not entirely within the control of the individual, or on the other, a perception of the written plan as otiose, an unnecessary refinement. More-over, the absence of a written plan is not necessarily indicative of a lack of attention to planning or organisation. The mental plan and substantive redrafting may be alternative pathways.

The Inventory

The term inventory describes a strategy in which the likely content of the essay is in some way catalogued, but the catalogue does not aspire towards completeness or does not set out the sequence to be followed. This strategy is followed by three Psychology and four History students.

Sue, a History student, likes to write up her essays in a day, working free from interruption at home. She says that she does not make a plan, but works from two lists: one contains all the points, ideas and thoughts she thinks may be important; the other is a list of the most important facts. The essay is then written from these in a single draft, although the introduction may be revised, and Sue comments that:

> That doesn't mean that everything's going to go well, or that in midstream I'm suddenly not going to come up with some new direction or something very important that I missed.

Another of the History students, Joanne takes as many as 30 sides of notes, 'depending on how carried away I get'. The notes are then torn up and sorted into piles, as a basis for the rough draft of the essay. Joanne only very rarely makes an essay plan, but has 'an idea in my head of how it's going to go'.

Rosemary, a Psychology student, opts for brief notes. Once she has completed the preparatory reading, she draws up a list of headings and consults the reading sources whenever more detailed coverage of the material seems called for. Though she may sometimes attempt to arrange the headings in sequence, conclusions are unplanned and she may begin work on the introduction as a means of finding her way into the essay:

> I wrote down what I was going to write about in the essay, in the intro-
> duction, in the sort of order that I was going to write about it. And,
> uh ... hopefully it was going to make - it was a sort of plan for my
> essay. But I don't think I followed it ... very exactly.

For Gail, also a Psychology student, the 'inventory' is itself a way of getting
started. Typically it includes only notes for an introduction and headings
which will form the basis for the first two or three paragraphs which follow it.
She finds it very difficult to stick rigidly to a plan because 'it never works
... it never turns out like that', and she writes some of her essays without
any kind of plan.

These four examples illustrate the different patterns which inventories may
follow. But as they also indicate, the inventory is a partial plan which
leaves some decisions about coverage and sequence to be resolved in the process
of drafting.

The Basic Plan

The strategy of the basic plan is followed by four Psychology and four History
students.

For Ellie, a Psychology student, a crucial preliminary to writing is to 'have
an actual think' and then prepare a plan 'with the compulsory coffee stain'.
She describes the plan, which helps to lessen her anxiety, as

> Almost a spatial plan, because I start to say to myself, you know, first
> of all at the top of the essay, and then I see the bottom, and it's a
> case of filling in the middle.

Actually writing the essay, which she aims to complete in a single draft, is a
chore:

> I'd like to (laughs) plan the essays, not to have to write them.

Nick, on the other hand, who is also a Psychology student, regards planning as
unpleasant but necessary:

> It's worth doing, 'cos it makes the essay a hell of a lot easier to do.
> This is a painful part of it, but it's better than your essay going here
> and there - the tail wagging the dog or something.

His plans may include diagrams, which help him to visualise links between
points.

For one of the History students, Martin, a plan consists of the main points of
the essay accompanied by one or two supporting examples. Planning involves
deciding on the most important aspects of the topic, categorising these, and
indicating examples beneath them. He may redraft an essay up to three times
since he feels his command of English is 'awful', but redrafting may also
entail reordering.

Kate, another of the History students, writes her essays in a single draft,
though she consciously delays adding a conclusion, to leave time for further
reflection. She works from a plan which comprises the points she wishes to
make in sequence. Generally, however, her plans are not detailed ones:

> I know that you really need to introduce it, and argue it out, and then
> conclude it, but I don't go in for detailed essay plans. I used to, but
> I usually just jot down the points I want to make, on a piece of paper,
> from what I've ... assimilated.

The distinguishing features of the basic plan, therefore, are that it is
intended to cover all the main points or headings to be explored in the finished
essay, and that the order in which these will be dealt has been determined,
provisionally if not definitively. Introductions and conclusions may or may
not form part of the basic plan.

The Extended Plan

The extended plan may be considered as a variant of the basic plan rather than
a markedly different strategy, since it differs in one principal respect
only. Having drawn up what is in effect a basic plan, students take this a
stage further. The headings or sub-headings in the plan are given some kind of
numerical or alphabetical code, and the students then systematically
rescrutinise their notes, marking each item with the appropriate code for ease
of subsequent consultation. As Pattie, a History student, explains:

> I draw up a plan, and go through my notes, numbering each different point
> on the notes, and then try and put it all together. It's like a jigsaw
> puzzle, I think.

The extended plan is a strategy followed by four of the Psychology and five of
the History students. There is a relatively high degree of uniformity amongst
them, all but one of the students in each subject group aiming, not surprisingly,
to write the essay in a single draft. However, one History student schematises
his notes only for sections of his essay which are particularly difficult,
while one of the Psychology students, having coded her notes in terms of the
points she will raise, then re-writes her notes, and may then make further
decisions about how the material is to be grouped.

The Evolving Plan

A common feature of the inventory, the basic and the extended plan is that
although in some instances reading and note-taking may be preceded by reflection
about the problems posed by the essay question or the kinds of issues which
might be dealt with in the finished essay, planning is at base an activity which
follows reading and note-taking. What distinguishes the evolving plan as a
strategy, however, is that advance reflection about the nature of the end-product
becomes an integral part of the preparation of the essay. Planning, therefore,
however tentative or provisional it may be, is an activity which is initiated
from the outset, rather than largely postponed until reading and note-taking
have been completed. The initial plan then gradually undergoes modification as
work on the essay proceeds.

Laura, one of two History students following an evolving plan, describes it as
follows:

> I think I always start off with trying to have some ideas about what I
> think the essay should be saying, try to make a plan, to have some idea
> of where I think it should be going. And then I read, make notes and ...

Her next step is to make a more detailed plan in the form of paragraph headings, and the first draft of the essay may be revised and further developed in two or three further drafts.

Will, the second of the two History students, begins work on the essay with 'a rough idea of the arguments' from his lecture notes. He likes to do some general reading, without taking any notes, before making an initial plan of 'the points to consider' rather than 'the actual argument you're going to use'. Next, he embarks on more extensive reading and note-taking, and then draws up a new and more detailed plan, having decided 'what argument you are going to use, and how to attack the others'. Harry says that he always feels that 'you should spend more time on a plan really than you should do actually writing'.

Anne is one of three Psychology students whose strategy is that of an evolving plan. She explains why she thinks working from an initial plan is useful:

> I think it makes it a lot easier to do the reading. Otherwise you read lots of things, and then you come round to writing the essay and you find you've read, uh, everything that's not important. (Laughs) And you've not got anything on what you're writing about.

For one of the essays she describes the initial planning was quite extensive, perhaps reflecting in this particular instance an unusual level of prior knowledge of the topic (knowledge which nonetheless had subsequently to be supplemented by further reading):

> One of my social psychology essays was about what sorts of principles I would derive from the course so far that would be useful in helping a group like a committee to work more effectively. I made several plans there actually. I thought I'd start off with a definition of a committee. And then I decided not actually a definition but more a, an example that I could then use throughout the essay. So I started off giving ... just an example of a committee and, um, explaining what sorts of problems that committee would come up with ... as it went along. And, with each problem, I'd say what a social psychologist could tell them, how to overcome that problem.

As the examples we have given suggest, there are variations in students' essay-writing practices over and above differences in their planning strategies. Although, for example, the approximate median time spent on an essay was between 13 and 15 hours for both subject groups, this figure conceals considerable disparities. The lowest estimate given by a History student was 5.6 hours and the highest nearly 30 hours. The corresponding figures for Psychology were 9-10 hours in the case of one student and 30 hours in the case of another. Similarly, estimates of notes taken varied from 2 to 40 sides in History and from 0 to 30 in Psychology. And while such self-reported estimates are inevitably impressionistic and should be viewed with caution, it seems unlikely that such wide divergencies can be wholly accounted for by subjective errors.

The ways in which students wrote up their essays showed less variation, the combination of 'rough draft' and 'clean copy' being the most typical approach. Few students engaged in substantive redrafting, and for two of those who did so the impetus seemed to be as much their difficulties with style and grammar as the desire to reorder what they had written.

A more general observation is that when differences in time spent, notes taken and approaches to writing up are examined in relation to the five planning strategies, no striking pattern of interconnections emerges. This, of course, may simply be a function of the small samples of students involved. Nonetheless, the main findings of this study suggest that more fruitful interconnections are to be found elsewhere: in the relationships between planning strategies and students' conceptions of essay-writing.

CONCEPTIONS OF ESSAY-WRITING

In the analysis of the interview data, it became apparent that, within each subject group, there were differences between students which were not confined to a single essay task but appeared to be applicable across the various essay tasks recounted in the two interviews. Moreover, such differences seemed to be mirrored in students' more general observations about the nature of essays and essay-writing in the course unit and discipline concerned. In other words, witi 'n each subject group, students seemed to hold distinctively different conceptions of what an essay was and what essay-writing involved (1).

The most fundamental aspect of each of the conceptions identified is a global definition of an essay. And each global definition can be dissected into three sub-components, each of which embodies a specific stance towards what can be regarded as three core elements of essay-writing. These three core elements were not determined a priori but emerged from the analyses. They are: data, the subject-matter which forms the raw material or bedrock of an essay; organisation, the structuring of the essay into a particular sequence or order; interpretation, the meaning(s) given to the essay material by a student.

In the case of the History students, three conceptions of essay-writing could be identified: 'Arrangement'; 'Viewpoint'; 'Argument'. For the purposes of the present paper, the discussion will concern itself only with the 'Arrangement' and 'Argument' conceptions (2). We begin with the latter.

Where the students conceive of essay-writing as argument, an essay is defined as the ordered presentation of a distinctive position or point of view well-supported by evidence (see Table 1). As Harry puts it:

> In an essay you really have to think about something, just keep thinking about it as regards all the reading and evidence you're going to use. You have to follow a coherent argument, basically. And that's the only time you have to - like in a lecture you don't and in a seminar you just usually state your point of view on a certain point. You don't form an actual coherent argument ... along a broad theme, really.

Within this global definition, interpretation is uppermost. The essential character of an essay lies in the distinctive point of view or position which is conveyed. If the essay is to constitute an argument in its fullest sense, nonetheless, the point of view or position conveyed must be coherently presented and backed up by evidence. Yet these latter two sub-components of organisation and data, though crucial, are subordinate to the interpretive stance, serving as the vehicles upon which it is conveyed. To put it another way, decisions about organisation and data selection are made in the light of the interpretive position or point of view which is to be advanced.

Table 1:   Conceptions of Essay-Writing (History Students):
           Global definitions and sub-components

	Level I Conception "ARRANGEMENT"	Level III Conception "ARGUMENT"
Global Definition	define an essay as an ordered presentation embracing facts and ideas	define an essay as the ordered presentation of an argument well-supported by evidence
Sub-Components		
a. interpretation	*an acknowledgement that it is useful or important to express any ideas or opinions you may have*	*a concern to take up a distinctive position or point of view on a problem or issue*
b. organisation	*a concern with organisation as such, but without reference to the aptness of organising principles*	*a concern with an essay as an integral whole*
c. data	*a concern with data, but quantitatively, with no explicit criteria of selection*	*a concern with data as evidence, substantiating or refuting a particular position or viewpoint*

The particular character of this conception may become clearer by contrast with
the second of the two History conceptions discussed here, where essay-writing
is seen as arrangement. In this latter conception, as Table 1 shows, an essay
is defined as an ordered presentation embracing facts and ideas. A comment by
Donna illustrates this:

> I don't think we get a lot of our own ideas into it. (...) It just seems
> to me as though you're reading about a period, and trying to fit your
> reading into an essay. It just seems like a lot of facts more than
> anything else.

An examination of the sub-components of the definition is again instructive.
Here interpretation, for example, is seen as a question of including in the
essay whatever ideas or opinions you may have, whereas in the Argument
conception, ideas and thoughts are refined and moulded into a unified position
or point of view. And whereas in the Argument conception decisions about
organisation and data pivot upon this interpretive stance, in the Arrangement
conception the three sub-components are not hierarchically interrelated. It is
as though each sub-component is viewed in a self-contained way. Thus data is
simply amassed rather than marshalled in support of a position or point of
view. Similarly, the organisation of the essay is a matter of convenience or
aesthetics, rather than a means of giving coherence to the presentation of a
point of view or position.

Table 2:   Conceptions of Essay-Writing (Psychology Students):
           Global definitions and sub-components

	Level I Conception "RELEVANCE"	Level II Conception "COGENCY"
Global Definition	define an essay as an ordered discussion of relevant material on a topic or problem	define an essay as a well-integrated and firmly grounded discussion of a topic or problem

Sub-Components

a. interpretation	*an acknowledgement that essays entail the expression of any ideas, thoughts and opinions you may have*	*a concern to present a consolidated view of a topic or problem within which your own ideas and thoughts have been integrated*
b. organisation	*a concern with organisation in the sense of linking parts to one another rather than structuring a whole*	*a concern with an essay as an integrated whole*
c. data	*a concern with coverage of relevant material, where relevance is viewed as if it were an inherent characteristic of the psychological literature*	*a concern to build an essay upon a firm empirical foundation*

Amongst the Psychology students, two conceptions of essay-writing were identified (see Table 2). In the first of these, 'Relevance', an essay is defined as an ordered discussion of relevant material on a topic or problem, as illustrated in a comment by Yvonne:

> It's really hard to describe it. (...) You've got tons of information, and somehow you've got to sort it out to the relevant points, which is quite difficult to do. And then, um, write about it, and put in your own ideas as well.

As Table 2 shows, it is the sub-component of data which chiefly differentiates this conception from the History conception of Arrangement. Yet in an essential respect, the two conceptions are strikingly similar, for in the Relevance conception too, the sub-components are viewed as though self-contained. Decisions about organisation and data are not married to a superordinate interpretive stance.

In the second of the two Psychology conceptions, 'Cogency', an essay is defined as a well-integrated and firmly grounded discussion of a topic or problem. As Vicky puts it:

The most important thing is the way it's set out, that the point you're making or whatever you're trying to write about should follow logically, and clearly, that you shouldr't jump about from one theme to the other.

When compared to the History conception of Argument, it is the sub-components of interpretation and data which are viewed distinctively. In respect to data, there is a concern to root the discussion firmly within the confines of the psychological literature rather than seeing the latter merely as a useful resource upon which to draw. Interpretation also reflects this grounding in the literature. As Barry puts it:

They want you to have your own views, but you need to sort of know everybody else's first.

Despite these differences, nevertheless, the conceptions of Argument and of Cogency, though they stem from different disciplines, share the common characteristic of subordinating the sub-components of data and organisation to that of interpretation. Whether interpretation takes the form of a consolidated view, in Psychology, or of a distinctive position or point of view, in History, it is central and predominant. Data and organisation are servants to its master.

PLANNING STRATEGIES AND CONCEPTIONS

In outlining the four conceptions, we have shown that structurally they can be paired across the two subject groups. In neither the History conception of Arrangement nor in the Psychology conception of Relevance is interpretation superordinate, and the sub-components of the global definition are viewed as if each were self-contained. In the Argument conception of History and the Cogency conception of Psychology, by contrast, the three sub-components are interrelated, with data and organisation subordinated to interpretation. Retaining these two pairings, we can look again at students' accounts of their essay-writing procedures, focussing upon each of the five planning strategies in turn.

The numbers of students following the 'no plan' strategy is small, but two Psychology students provide a useful focus since they do not share the same conception of essay-writing. Though the first of these, Barry, does not make a plan, the interpretive emphasis of the Cogency conception is apparent:

I try and get it to stick together, so that it isn't just like a lot of little extracts from books, it's like a coherent argument.

In the case of Wendy, however, who holds the Relevance conception, the unifying force of an interpretive stance is lacking:

I think the format of (the essay) is alright, but I got a bit carried away on, sort of, how children learn language rather than the capacities, sort of the stages in it. /Interviewer: Does that happen often?/ Yes, I think so. You tend to forget the question. With essays of this length, you think, 'oh, I'll leave it in, it'll fill it out a bit'.

In the case of the inventory strategy, a comparison with the paired conceptions becomes possible. The first two extracts are from accounts by Rosemary (Relevance conception, History) and Sue (Arrangement conception, History).

The third and contrasting extract is by Graham (Argument conception, History):

> I didn't spend very much time on planning it all. I was so confused as
> to what to put in it, I thought, 'oh, let's bung this in, let's bung this
> in. (...) The hardest thing was actually deciding in the first place
> what to put in it, which I didn't spend enough time doing. Elaborating
> on certain points, that's quite easy, 'cos you can just look at your
> notes. Or references in books, just putting things in it which are
> relevant. That's usually how I see it in every essay.
>
> ————————
>
> If I haven't formulated a very definite plan, and if I'm not quite sure
> how my essay's going to go, then I'll probably take a main theme in a
> book and work through that way. In History you might have a problem
> about whether to deal with ideas, sort of, a chronology, you know, which
> approach to use. And if I have got a problem like that, then I'll use
> the authority, you know, the book, and work through their way.
>
> ————————
>
> As I'm going through (a book) a second time I pick out the points I want
> to say, and think of the reference to the question. ... And then after
> that I seem to know where I want to start. (...) Then I read (the essay)
> again, and find any points I've missed and tie it all in to the conclusion.

In the first two extracts, planning seems to mirror the lack of prominence given
to interpretation in the two conceptions concerned. In the first extract,
decisions about what to include are not anchored to a clear perspective on the
question. In the second extract, the relation between the structuring of the
material and what the essay is to convey is sidestepped rather than confronted,
through a reliance on an external authority. In the third extract, on the
other hand, the authority or point of reference is the student himself and the
interpretive stance he has chosen to take up.

The accounts of students who follow the basic plan again reveal the interpre-
tation of planning and conception. For example, in an account by Ellie
(Relevance conception, Psychology), the organising principle of the plan is
uninformed by a personally distructive view of the problem set. It is the
nature of the data, the source material, which determines the framework
adopted:

> If I've got ten authors, it's their angles that I'll decide to use, and
> where to use. And that's what my plan looks like. Usually it's just a
> list of authors' names ... written down the pages I want to bring them
> in, but sometimes obviously afterwards I realise, oh no, he's not going
> there, he's going there. And that's how I do it really, rather than the
> subject – which probably isn't a very good idea. But I hate seeing an
> empty page, 'cos I get panicky, if I'm trying to plan an essay.

This essay may be contrasted to two others by Nick and by Chris, representing
respectively the two paired conceptions of Cogency and Argument. In Nick's
basic plan, the nature of the source material has itself to be considered, but
in alliance with the problem of how to best get across his consolidated view:

> You think, well, 'What have I got here?' Um, 'how can I arrange it?'
> Should I for example give a load of factors that might be involved –
> before I discuss the actual principles that might be useful in helping
> groups? And I thought, well (the factors will) form a basis for actual
> discussion, 'cos if (the tutor) doesn't know what I'm talking about, he
> can't know what the principles mean. So I thought, well, use these

factors, that'll be the first part of the essay. And the rest of the essay is the actual principles, and then the conclusion.

And in a parallel way, for Chris, a History student, his plan is a stratagem for giving expression to his conception of what an essay is:

> My plan here is, like, the key, because I get everything in a logical order where everything's building up, you know, and point 1, boom, boom, boom, boom, like that. And so I try to aim that, come the end of the essay, that no matter what they thought before that, the logic of the argument and the evidence produced is such that, even if, you know, they don't agree with my interpretation, they've got to say, um ... it's reasonably argued.

In relation to this particular discussion, the extended plan is indistinguishable from the basic plan, since it essentially entails taking the latter a step further by coding one's notes. And indeed, the students' accounts have the same features as those exemplified in the basic plan. For example, Edward (Argument conception, History), refers to his plan headings as 'giving you your little centres of argument', while, equally characteristically, an account by Donna (Arrangement conception, History) is flat and mechanical, lacking the criterion that an explicit interpretive stance would provide:

> I read through my notes, and try to split it up into sections, so that I can get an essay plan. (...) It might not necessarily be in the right order, but then I'll mark it through and decide what order it's in. And it'll just be 1, 2, 3 ... but it's hard sometimes because various topics merge into each other and you never know how to separate it. Sometimes there's no distinct line, and you get, put bits in the wrong bits, and things like that.

An examination of the fifth planning strategy, the evolving plan, offers the possibility of comparisons but not of contrasts. The four Psychology students who follow this strategy were ascribed to the Cogency conception and the two History students concerned to the Argument conception. One of the latter, Will, illustrates how planning the construction of the finished essay is directed towards making clear his interpretive stance:

> I try to make my essays well-ordered, so that whoever marks it knows where I am going and what I'm going to argue before actually - well, before they actually get into it.

But what distinguishes the evolving plan, as we saw earlier, is that planning is initiated from the outset rather than following the steps of reading and notetaking. Some questions, however, may lend themselves more readily to this than others. Mike, a Psychology student who likes to review what notes he has before making an initial plan, provides examples of two possible options:

> Lecture notes are always a generalisation and a simplification, so it's a nice way of building up and getting into things. So, these are the concepts, where do I go from here, where are these concepts taken from, how do they apply?
> _____
> I tried to sit down and think from the actual (course notes) what would be involved. And the lecture and seminars were quite sort of comprehensive on the topic of properception but I found it easier myself to sit down and think it out and then go and look up references to the various bits. I thought, what would a person do then, what would a person do

next? And then I'd look up the relevant perceptual action, when I could find it, and then I'd review it, and if there were any gaps, I'd look at them.

In the first instance, the knowledge he starts with is limited, and so the initial plan has the function of sharpening an interpretive focus. The consolidated view he is working towards is still in embryo, but he can nevertheless try to build from as firm a base as possible. In the second instance, the knowledge he can bring to bear on the essay concerned is greater and the interpretive focus correspondingly sharper, so that, as he subsequently comments, he was able to adopt the framework he had initially formulated in the finished essay, since he was 'actually thinking it out in the order in which it should go on the page'.

One further observation is necessary with respect to the evolving plan. It can be seen as a systematisation of a procedure which other students follow in a less formal way. Indeed, amongst students with the paired conceptions of Argument or Cogency, there were frequent instances where reading and notetaking were given purpose and direction by dint of reflection about what the finished essay would comprise. Chris, (Argument conception, History), discussing what sorts of notes he takes in his preparatory reading for an essay, provides one of many such examples:

> I try to find the author's own particular view, his argument, and plunder it for facts. Whether, you know, the facts that he gives, whether I agree with his argument or not, I think that the main thing in an historical essay is that you make a case and you've got to back it up with actual facts of what happened, and evidence.

Finally, it is fruitful to look at the distributions of the students when conceptions are related to planning strategies. Here the conceptions remain paired, and for the purposes of comparison the planning strategies can be paired too. The first of the latter groups combines the strategies 'no plan' and 'inventory' (on the grounds that the latter can be considered as a partial or incomplete plan) and the second combines the 'basic', 'extended' and 'evolving' plans. Moreover, a total of six students are excluded from the analysis since their ascription to a particular conception was in some way qualified - normally because they had taken part only in the first and main interview or because the criteria of ascription were not satisfactorily met.

The analysis yields the interesting result shown in Table 3. Looking first at combinations A and C, it is apparent that amongst students ascribed to the History conception of 'Arrangement' or the Psychology conception of 'Relevance', both groups of planning strategies are almost evenly represented. By contrast, as combinations B and D show, students ascribed to the conceptions Argument (History) or Cogency (Psychology) almost overwhelmingly adopt the strategies of the basic, extended or evolving plan.

Table 3: Distribution of students in relation to combinations of planning
          strategies and conceptions (N=22)

	CONCEPTIONS	
	'Arrangement' (History) or 'Relevance' (Psychology)	'Argument' (History) or 'Cogency' (Psychology)
PLANNING STRATEGY		
(i) No plan or inventory	*Combination* A 6	*Combination* B 1
(ii) Basic, extended or evolving plan	*Combination* C 5	*Combination* D 10

The four combinations shown in Table 3 can be retained in an examination of
the students' performance. Two measures of the latter were available. The
first is aggregate coursework marks, based on two essays in the Psychology
course unit and four essays – the last of which, a more substantial assignment,
was double-weighted – in the History course unit. The second is final degree
results. Of the 22 students, two were awarded third-class, ten lower second
class and ten upper-second class honours degrees. The criterion adopted here
is therefore the percentages gaining an upper-second class degree.

Table 4: Academic performance related to combinations of planning strategies
          and conceptions

	mean coursework mark	% gaining upper-second class degree	n
Combination A (No plan or inventory) + (Arrangement or Relevance conception)	56	17	6
Combination B (No plan or inventory) + (Argument or Cogency conception)	52	–	1
Combination C (Basic, extended or evolving plan) + (Arrangement or Relevance conception)	58	40	5
Combination D Basic, extended or evolving plan) + (Argument or Cogency conception)	62	70	10

As Table 4 shows, there is an observable association between the four combi-
nations and coursework marks or class of degree. (A similar association is
apparent when the analysis differentiates solely between the two groups of
planning strategies, regardless of conception, or between the two pairs of
conceptions, regardless of planning strategy.) Given the limitations of the
sample, however, these findings should be viewed with caution.

PLANNING IN PERSPECTIVE

This paper began by noting recent challenges to the preeminent position which
the plan has long enjoyed in advice on essay-writing. In the findings of the
empirical study that has subsequently been examined, however, the hegemony of
the essay plan seems undisturbed. There were no examples of the drafting-
redrafting strategy which Elbow (1973) has vigorously advocated an an
alternative. A keen sense of caution is nonetheless important. First, these
findings stem from a small-scale intensive study involving two groups of
students in a single institution. The question whether planning holds sway
generally, in other institutions or across the disciplines, remains an open
one. Second, if the advice to plan is a received orthodoxy in educational
institutions, then these two groups of students, it may be presumed, were
unlikely to have remained immune from its influence. What the consequences
would be were drafting-redrafting to be widely canvassed an an alternative
are therefore also unknown.

The analyses of the findings do however clearly indicate that the essay plan
is not a unitary phenomenon. Where the students did make some kind of essay
plan, four distinct planning strategies - the inventory, the basic plan, the
extended plan and the evolving plan - could be identified. But though the
distinctions between these are clearly interesting in themselves, the main
findings of the study pointed to the necessity of an understanding of planning
strategies in relation to students' conceptions of essay-writing. Put another
way, it is not just how a student plans that seems to be important, but also
what it is that the plan seems directed towards.

Two contrasting conceptions were described for the Psychology students: of
essay-writing as Relevance, and of essay-writing as Cogency. Two of the
conceptions identified as being held by the History students were also
examined: of essay-writing as Arrangement or as Argument. And while these two
sets of conceptions reflect in their respective concerns the disciplines from
which they stem, it is nonetheless possible, as we saw, to view the conceptions
as two cross-disciplinary pairs. One pair, the conceptions of Argument and
Cogency, pivot upon the fulcrum of an interpretive stance which critically
determines questions of organisation and data. The other pair, the conceptions
of Arrangement and Cogency, are matched in the lack of prominence each accords
to interpretation and in the almost hermetic status of interpretation,
organisation and data within the conception. Not surprisingly, these
fundamental qualitative differences between the two pairs of conceptions were
also evident in the students' accounts of essay-writing. To understand the
nature of essay planning, it was necessary to examine the close interpenetration
of planning strategy and conception. The outward characteristics of a planning
strategy were in themselves an insufficient indicator of the quality of essay-
writing as a learning activity.

These findings can also be briefly considered against the wider background of research on student learning. As Svensson (in press) has shown in a wide-ranging discussion of research in the area, organisational aspects of learning cannot be considered in isolation from referential meaning. The skilled learner does not structure subject-matter in a mechanical or gratuitous way, but finds an organising principle which takes account of the content of what is to be learned. Learning thus grows from a way of organising the learning material in the light of what it is taken to mean. Similarly, what the present study suggests is that the mainspring of accomplished essay planning is not organisation alone, but the alliance of organisation to the interpretive view or position which is to be conveyed.

But what, finally, do these findings imply for advice to students on essay-writing? The most obvious and important implication would be that in guidance on planning, the discussion of means should be subordinated to the discussion of ends. Advice on planning is likely to be of limited usefulness if it fails to confront an inappropriate grasp of what is meant by an essay. The recent guide by Clanchy and Ballard (1981), which starts from an analysis of tutors' expectations, seems to offer a promising way forward.

NOTES

(1) For a discussion of the term 'conception', see Säljö (1982).
(2) The three History conceptions are examined in Hounsell (in press).

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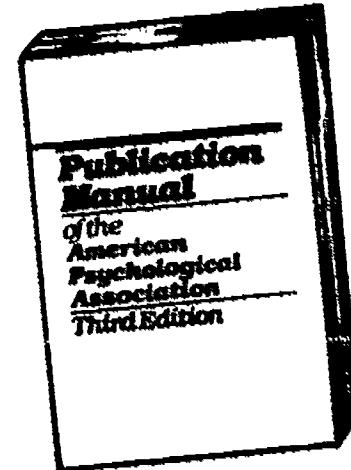
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Student Perceptions of Factors Influencing Tertiary Learning

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ABSTRACT
An interview study about perception of factors involved in tertiary learning of 60
second year students at the Australian National University is reported. Factors which
encourage deep rather than surface level processing are highlighted as are problems
of transition from school to tertiary learning. An unexpected outcome was that
students' responses to probing about the nature of the differences between school and
tertiary learning provided evidence of qualitative differences between the way
students utilising deep or surface level processing conceive the process of learning
itself. This finding has implications both for those attempting to change these
students' approach to learning and for the selection of research methods appropriate
for this area.

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In recent years research into student learning has emerged from the highly
controlled laboratory of the experimental psychologist. At one time college
students were treated basically as a convenient source of subjects for research
designed to uncover general laws of learning. However, by the very fact of
controlling variables and using artificial learning tasks, such research all
too often had little relevance to learning as it occurs in the real world.
It is now recognised that investigating the way students go about their
learning in the natural tertiary setting may be "more likely to produce models
of the learning process which have demonstrable ecological validity" (Entwistle
and Hounsell, 1979, p.359).

Within the area of research into student learning in its natural setting there
exist two contrasting research methodologies (Entwistle and Hounsell, 1979).
The traditional 'psychometric' or 'scientific' approach typically involves
sophisticated statistical analysis of students' responses to structured
inventories.   The alternative approach, sometimes referred to as the
'experiential perspective' (Marton and Svensson, 1979), typically uses intensive
interviews for a more in-depth look at the way students perceive and react to
their academic environments.

Proponents of the latter approach criticise the psychometric approach for its
search for mechanistic cause-effect relationships and its reliance on
quantitative concepts; because it tries to exclude 'contaminations' which arise
from research in real-life situations; because its perspective is that of the
observer and not that of the subject and because such an approach cannot account
for the variability of student behaviour (cf. Elton and Laurillard, 1979).

However, this writer would argue that recent investigations of student learning
from essentially a traditional perspective have been able to demonstrate how a
student's approach to learning can influence the quality of the learning
outcome (Biggs, 1979; Schmeck and Phillips, 1983); how students' approach to
learning may change according to the method of assessment (Thomas and Bain,
1982); and how students' perceptions of their academic environment may influence
their approach to learning (Ramsden and Entwistle, 1981; Watkins, 1982a). In
addition, recent developments in research methodology allow for a probabilistic
conception of causation and for mutual causation.   The technique of covariance
structures analysis (Jöreskog and Sörbom, 1978) allows for the investigation of
causal influences within a multivariate framework which at least is starting to
approximate the complexity of real-life situations.   Combined with the use of
confirmatory rather han simply exploratory statistical methods such techniques
are considered as major breakthroughs which enable the testing of theoretical
propositions using non-experimental data in an adequate manner for virtually
the first time (cf. Maruyama and McGarvey, 1980).

Despite these developments in research methodology from the psychometric
perspective there still seem to be at least two major difficulties with this
approach - its over reliance on structured questionnaires and its ability to
allow for unexpected outcomes.   The former difficulty refers to the restriction
of analysis to a set of statements in a pre-determined inventory which
"constrains the student to describe his approach within the framework of ideas
provided by the research worker" (Entwistle and Hounsell, 1979, p.360).
Entwistle and Hounsell also point out that it is difficult to convey the
"tentative, trial-and-error nature of much of student learning through a set
of inventory scores". It is surprising, therefore, that there have been to date
no interview studies of Australian tertiary students to investigate in depth
how they perceive the factors which affect their approach to tertiary study (1).

The research reported here represents one of the focusses of an interview study conducted by the author at the Australian National University. The aims of the study were as follows:

1. To investigate the validity of the 'Approaches to Studying' inventory (Ramsden and Entwistle, 1981) and the model of the study process complex underlying it.

2. To further explore the relationship between depth of processing and the quality of learning outcomes.

3. To investigate how students view their tertiary learning and what factors they perceive as influencing their approach to study.

The outcomes of that study relative to these first two aims have already been reported. Thus Watkins (1983a) claimed general support for the validity of both the particular inventory and the motive/strategy model on which it was based. In addition, a strong relationship was found between judges' independent ratings of the depth of processing utilised by the students and the quality of a learning task they had recently performed in their tertiary studies (Watkins, 1983b).

The outcomes of the study with respect to the third focus will be presented here. Answers to the following questions were sought:

(a) What factors do the students see as influencing their approach to study?

(b) How do they see these factors as influencing their approach to study? Does this vary according to age and depth of processing?

(c) Are they conscious of such factors when they go about their studying?

(d) Has their approach changed since leaving school or since coming to university?

(e) What role do their own opinions play in their studies?

(f) Are student perceptions of an academic department related to their adoption of deep or surface level processing?

METHOD

Sixty students who had completed Entwistle's 'Approaches to Studying' inventory during the third term of their first year at the Australian National University (ANU) were interviewed during the middle of their second year at ANU. These subjects were chosen to represent the ten highest scorers on the 'meaning orientation' scale and on the 'reproducing orientation' scale from students in each of the Faculties of Arts, Science, and Economics who would agree to be interviewed (each of these Ss scored at least one standard deviation above that Faculty's mean score on one of these orientations, none of the Ss were high scorers on both orientations).

The interviews were loosely structured so that information was obtained on a
learning task the students had recently worked on for their university course;
how they studied in general; what sort of factors affected their approach to
study (e.g. subject area, topic, assessment method, grade desired, time
constraints, interest level, quality or method of teaching); whether their
approach had changed since leaving school and since their first year at
university; and whether their own opinions played any part in their studies.

The interviewers were instructed to allow the students as much freedom as
possible with their answers by, for example, starting with general questions
about what sort of factors the students saw as influencing their learning but
if this evoked little response then asking 'what about the subject area', 'the
topic', etc.

The indicators of deep and surface processing suggested by Laurillard (1979)
and Marton and Säljö (1976a) were utilised to classify the interviewees'
approach to the particular learning task discussed. Thus a student who
generally tended 'to focus attention on the content as a whole', 'to try to see
the connection between different parts', and 'to think about the structure as a
whole' would be classed as utilising deep level processing. On the other hand,
students who usually 'focussed only on the elements of the content', 'saw their
tasks primarily as memory tasks', and 'approached the task unthinkingly' would
be rated as surface level processors. If a subject could not be classified as
preferring one or other level of processing on the basis of these indicators or
the other interview questions, he or she was placed into an intermediate
category. Each subject was classified as to their depth of processing on the
particular task and in general, both by their interviewer and a judge who
studied the interview protocol. Neither was aware of the subject's 'Approaches
to Studying' scale scores. Further details of the interview and classification
procedure are given in Watkins (1983a, b).

The students were also asked to rate the course from which the learning task
they had earlier discussed came. Five-point (1-5) scales were used with regard
to each of the following criteria: informal teaching methods - formal teaching
methods; very unclear goals and standards - very clear goals and standards;
vocationally irrelevant - vocationally very relevant; very bad teaching - very
good teaching; no choice of ways to learn - considerable choice of ways to
learn; not at all open to views of students - very open to views of students;
very light course workload - very heavy course workload; very bad social
climate amongst students during course - very good social climate amongst
students during course. These categories were taken from Ramsden and
Entwistle (1981).

RESULTS

Approach to Study in General

The interviewer attempted to find out about the students' approach to learning
in general by asking: "What sort of things affect your approach to a task?".
(It was made clear to the students that it was learning tasks in general rather
than a specific task that was of interest here.) About half the students
answered this question without prompting. The younger Science and Economics
students in particular found it difficult to answer such a general question.

Interest was by far the factor most commonly suggested by the students. Two
typical comments were:

> "Interest - such as 'why painters paint' - all those questions
> which I constantly think about myself.   When subject is
> boring I tend to spend very little time on it ... I won't
> work in a subject I have no interest in - interest is the
> thing."   (Older Arts female)

> "I think my interest has something to do with it - relating
> my interest in these stats ones would be to understand the
> principles involved, because I certainly understand a lot more
> about mathematics now than when I started the course, which
> has surprised me because I thought I was a proper zero when
> it came to maths - and I've p⸱ ᵛed that I'm not. And with
> Economics, if I found the essay topic interesting, it gave me
> a lot more of a reason to read widely before writing up the
> essay. Not only to put in a good essay and hopefully get a
> good mark for it, but because I was interested in it."
> (Younger Economics male)

Some other factors mentioned by more than one studer.t were the method of
teaching, the weighting of assessments, and time available for study.   Some
comments to illustrate these points are presented below:

> "The way its presented; 'way I have been taught'. Different
> teachers go about things in different ways. Some give quite
> a lot of examples e.g. computer science, and others give a
> lot of theory and so handle things in different ways."
> (Older Science male)

> "How much weighting it has towards the final mark affects
> how much effort I put into it. Peer pressure - don't want
> to do badly in an exam everyone else thinks is easy. Time
> I have on hand ... though if I'm busy I make time and if I
> have time I tend not to study - probably same amount of
> effort regardless of time."   (Younger Science female)

Factors Affecting Approach to Study

The students were then asked if each of the factors shown in Table 1 influenced
the way they went about their study (the way the student interpreted this
question is discussed below). The percentage reporting affirmatively is shown
in that Table.

As can be seen 'interest level', 'type of assessment', 'quality of teaching',
and 'different subjects' were reported as influencing factors by over half of
both those who generally utilised deep or surface level processing.   'Grades
sought' and 'time for study' were much more commonly reported as factors by
those classified as generally utilising deep level strategies.

How Factors Influence Study

However, it was when the student's description of the way these factors
influenced their approach to study were examined that a very clear 'deep'
versus 'surface' distinction became apparent (see Table 2).   Three categories
of response emerged from analysis of the students comments.   These referred
to:

> quantitative differences - a factor which influenced how much effort

Table 1:   Percentage of subjects reporting that a factor influenced their approach to study by faculty and depth of processing.

FACTORS	ARTS		ECONOMICS		SCIENCE		TOTAL	
	Deep (n=14)	Surface (n=6)	Deep (n=9)	Surface (n=8)	Deep (n=9)	Surface (n=10)	Deep (n=32)	Surface (n=24)
Different subjects	42.9	83.3	55.6	75.0	66.7	50.0	51.5	69.6
Different topics	28.6	16.7	11.1	25.0	0.0	10.0	15.2	17.4
Type of assessment	71.4	66.7	77.8	87.5	88.9	50.0	75.8	69.6
Grades sought	57.1	0.0	66.7	37.5	66.7	20.0	60.6	21.7
Time for study	85.7	16.7	44.4	25.0	44.4	50.0	60.6	34.8
Interest level	100.0	50.0	100.0	100.0	77.8	60.0	90.9	73.9
Quality of teaching	85.7	66.7	44.4	87.5	66.7	60.0	66.7	73.9

> they had put in, how hard they tried;
>
> qualitative differences - a factor which influenced the way they were learning and how they thought about what they were learning;
>
> organisational differences - a factor which influenced how well they organised their study.

The following comments help to illustrate the differences between these classifications:

> Quantitative difference: "I think if you're not interested at all in the subject matter you won't work."
> (Younger Science male)

> "If an assignment is worth a lot of marks I put a lot of effort into it."
> (Younger Science male)

> Qualitative difference: "If I'm interested (in the subject), gradually I get more in depth in what I'm doing - I'll start asking questions. If I'm not I just accept what the lecturer's or tutor's saying ... ."
> (Younger Economics male)

> "I find work interesting - it helps to clarify my thoughts about why I respond in the way I do to particular writers: "How does the writer get that effect?" Its quite interesting to think about ... It helps to have to write about it because if you just think about it, it can stay quite vague."
> (Older Arts female)

<u>Organisational difference</u>:   "If I'm short of time I don't
have time to plan what I'm doing."
(Younger Science male)

"I just sit down and think I have five assignments for the
week and would like to get this one finished by midnight."
(Younger Science male)

It would appear that (taken as a whole) those students who generally utilised
deep level processing were almost equally likely to refer to quantitative or
qualitative differences while surface level processing was more closely linked
to quantitative differences. Arts 'deep' and 'surface' level process utilisers
showed a clear preference for reporting qualitative and quantitative
differences, respectively.   In Science and Economics quantitative differences
were most commonly reported irrespective of processing but there was still a
trend for deeper levels to be more associated with qualitative differences.
Organisational differences were reported fairly evenly across depth of
processing and faculty groupings.

Influencing How Hard the Student Works

From the students' comments, it would appear that to encourage students to
study harder, one should:

1. Give more weight to assignments:

    "If the task carries few marks I work less hard ...
    (if its) worth more I panic and try hard."
    (Younger Arts female)

2. Use a wider grading system than pass/fail.   (It is doubtful
    how hard the following student would work if only a pass/fail
    grading was available):

    "If I'm aiming for higher grades I work harder."
    (Younger Science male)

Table 2:   Percentage of times factors were seen as influencing
            the quality, quantity, and organisation of learning
            by faculty and depth of processing.

	ARTS		ECONOMICS		SCIENCE		TOTAL	
	Deep (n=14)	Surface (n=6)	Deep (n=9)	Surface (n=8)	Deep (n=9)	Surface (n=10)	Deep (n=32)	Surface (n=24)
Quality	53.3	6.5	37.1	7.7	27.1	8.8	39.1	7.9
Quantity	20.0	61.3	48.6	66.7	47.9	68.4	38.3	66.1
Organisation	26.7	32.3	14.3	25.6	25.0	22.8	22.7	26.0

3. Arouse the interest and motivation of the student:

> "Interest – if I find it boring, I won't put much into it.
> And the attitude of the tutor also matters because if they
> expect high standards you're more likely to put more into
> it. And my attitude to the whole unit – if I'm enjoying the
> unit I'll put more into it too. If I think its interesting."
> (Older Arts female)

Influencing Deep Level Processing

From the students' comments the factors most likely to lead the student to
adopt deep level processing were:

1. The student must be allowed time to think through a topic:

> "Yes, (time is a factor) inasmuch as there is not enough
> time to gain a complete grasp of the subject. I dislike
> 'premature closure' which deadlines and workload tend to
> make almost obligatory. I don't like to leave a topic
> before having gained full knowledge, though this is very
> often impossible."
> (Older Arts male)

2. Assessment should be more by essay than by examinations
   (especially multiple choice):

> "I find studying for exams easier than essays – you don't
> have to think as much, you just have to learn what's there,
> that's all. I'm very good at regurgitating out on paper
> what I've read, so if I'm studying for an exam I'll read
> what I have to know about two or three times – that's it."
> (Older Arts male)

> "(With essays) you've got to have a fully developed
> argument. With an exam you don't – you've got to
> get the basic relevant facts down."
> (Older Arts male)

The point here is not that rote learning is more appropriate for multiple
choice tests but that these students tend to perceive that this is true.

3. The attitude of the department should be seen by the student as
   encouraging independent thinking:

> "I find in different subjects I approach essays differently.
> Different departments require a different sort of essay and
> a different sort of approach, looking for different things –
> that took me a while to get used to. I don't feel that when
> I write an English essay it's up to me to structure it
> usually, to work out a pattern for it. I usually begin an
> English essay by reading whatever it is, writing lots of
> notes. Then later I sit down and write the whole thing –
> think that's rubbish, change it and come up with a new
> thing. It's more my own work I suppose – I think English
> seems to want that fairly much. The other ones – I try to
> be systematic and think of steps I want to put in, and
> I usually write down separately the parts I want to use.

> Then I usually write the whole thing out once, then write it
> again. In History I think they're interested in you as a
> writer - they like you to write well. I know they want you
> to analyse it, see the faults and be practical about it -
> 'down to earth'. In History you're allowed to be a bit freer,
> suggest a few more possibilities. When I'm writing English
> essays I feel a bit freer - I think my opinion is as good as
> anyone else's, and I don't usually read anybody else's opinion.
>
> Sometimes when I'm reading for History and Prehistory I find
> it difficult because I've got everybody else's opinion and
> I've got to choose for myself which one I want. And then
> I find it difficult myself to have another opinion for myself
> and suggest something new and different. I'm not up to that
> yet: to analyse it all and then suggest something else
> (presumably speaking about History here) - Prehistory expects
> that a little bit, not so much as in History - in History I do
> think they want that particularly, to create something new - a
> new approach. I don't know: its a bit intangible, Prehistory -
> I'm not sure about it."
> (Younger Arts female)

4. The students' interest in the subject should be aroused:
    see comments earlier.

Influencing the Student to be Well Organised

Sufficient time was the factor most commonly mentioned with relation to being
well organised.

PERCEPTIONS OF ACADEMIC DEPARTMENT

The students' ratings of the department for whom the learning task they described
was performed are shown in Table 3 according to the depth of processing they
utilised.

Each rating was subjected to a 2(depth) x 3(faculty) ANOVA. While there were
a number of significant ($p < .01$) main effects for faculty, which do not
presently concern us, there was only one significant main effect for depth of
processing. It appears that students' adoption of deep level processing is
related to their perception of being allowed to choose the way they are going
to learn in the course. However, four significant interaction effects were
found. It seems that deeper levels of processing were associated with:

> teaching methods, which are less formal in Arts but more formal
> in Science and Economics;
>
> goals and standards, which are clear in Arts and Science but not
> as clear in Economics;
>
> vocational relevance, which is less high in Arts and Science but
> higher in Economics;
>
> teaching quality, which is good in Arts but not as good in
> Science and Economics.

Table 3:   Student perception of course by depth of processing used to perform learning task and faculty.

	Surface Processing			Deep Processing		
	ARTS	SCIENCE	ECONOMICS	ARTS	SCIENCE	ECONOMICS
	(n=5)	(n=13)	(n=10)	(n=15)	(n=6)	(n=8)
Informal – formal teaching methods	2.60	3.31	3.40	3.20	2.67	2.75
Very unclear – very clear goals and standards	3.40	3.38	3.80	3.87	3.83	3.00
Vocationally irrelevant – very relevant	4.00	3.92	3.50	3.27	3.50	3.75
Very bad – very good teaching	3.60	3.38	4.20	4.00	3.00	3.88
No choice – considerable choice of ways to learn	2.80	2.38	2.50	3.27	3.67	3.25
Not at all open – very open to views of students	3.20	3.69	3.80	3.87	3.67	3.50
Very light – very heavy course workload	3.60	3.69	3.80	3.47	4.17	4.00
Very bad – very good social climate	3.40	3.85	3.30	3.50	3.13	3.50

CONSCIOUSNESS OF FACTORS

Despite the above results it is not clear whether the students actually were
aware of weighing up such factors when they considered how to approach a
particular learning task.   The percentage of students reporting that they
were conscious that the factors discussed in Table 1 affected their approach
is shown in Table 4.   Clearly there are differences according to both faculty
and depth of processing, with deep level Arts students being much more likely
to report that such factors did influence them.

Some typical comments on whether the student was conscious of such factors
were:

> "Not really. If my marks aren't too good and I might try a
> different approach or talk to a lecturer - if I can find one."
> (Younger Science male)

> "No, I just take the question as it is. I don't worry about the
> weight of the mark. The time I have will determine how much
> time I spend on the assignment. I usually make sure I don't
> leave it till the last moment. I just take the question as it
> is. I don't worry about other influences."
> (Younger Economics male)

> "Yes, I always plan my study ... Need good methods to study
> effectively and to do assignments. When making a plan I take
> assessment method, grade, time into consideration ... try to
> leave extra time."
> (Older Science student)

Table 4:   Percentages of subjects reporting that they are conscious of
            factors influencing their study methods, that their methods
            have changed from school and from first year, and that they
            use their own opinions in their studies by faculty and depth
            of processing.

	ARTS		ECONOMICS		SCIENCE		TOTAL	
	Deep (n=14)	Surface (n=6)	Deep (n=9)	Surface (n=8)	Deep (n=9)	Surface (n=10)	Deep (n=32)	Surface (n=24)
Conscious of factors	85.7	66.7	22.2	37.5	77.8	20.0	63.6	39.1
Changed from school	85.7	100.0	88.9	100.0	88.9	60.0	84.8	86.7
Changed from first year at university	85.7	66.7	55.6	75.0	66.7	40.0	69.7	60.9
Use their own opinions	92.9	33.3	77.8	25.0	44.4	30.0	72.7	30.4

"Yes. The amount of time I've got - more time, I'll do more
research. How interested I am - more incentive to read more
if interested. If I find it difficult or easy. How much
that essay is going to count for in my assessment, e.g. an
Economics essay was worth 10% and due 2 days before an exam
so I decided not to do it. It's not worth enough considering
I could spend the time studying. They are the main things."
(Younger Economics male)

APPROACH TO STUDY CHANGED FROM SCHOOL

That the majority of subjects reported that learning at university is quite
different from learning at school is shown in Table 4. Once again, however,
there were distinct differences in the type of change that occurred according
to depth of processing - those adopting deep level strategies tending to report
qualitative changes while quantitative or organisational changes were much more
common with those classified as generally utilising surface level strategies.
The following comments illustrate this distinction:

Deep Level Processing:

"Definitely, (its different)... here it is self-motivation. And
you can choose which classes you attend, if you don't attend you
don't pass - its on your own head. Also, the way the subjects
are put across (at university) - you aren't just given a piece
of information and told to swallow it. You're confronted with a
new piece of information, you're told about it, and you're helped
to understand it. Its a whole different ball game really."
(Older Arts male)

"Very much so. School is so general - it is incredible what
I wrote in 6th form essays - wouldn't get you above the ground
here. In university you are expected to go 'behind' the book,
to be more detailed and to be more critical of yourself; to
look at things in an abstract way."
(Younger Science male)

"Yes, I found school learning was boring - I didn't put anything
into it. I mean, I quite enjoy study - I enjoy the result of an
essay that I feel I've done well. Whereas at school I couldn't
have cared less; I just found it boring. I didn't put much into
college either - maybe it was because I was on a scholarship; I'm
at university because I want to be here - I'm doing it off my own
bat. At college there was too much coming in at once, I found I
was flooded. Although the study methods are the same - though I
was only aiming at a pass at college. I do go into things in more
depth here. Conceptually the lectures are deeper - they make you
think more. There was one unit at college which I had to think
in and I really enjoyed - well, there were a few units where I
thought they just wanted you to know the stuff and not think about
it. So that's what I did - I just gave them what they wanted.
But I don't know whether it was my state of mind or the units -
though there were some units I was interested in."
(Older Arts female)

Surface Level Processing:

"Yes. when I first came here I didn't realise there would be
such a workload. Everyone said it would be different to school
but I thought there would be a lot of similarities. I realised
that I do have to spend a lot more time on the work and you do
have to keep working all the time otherwise once you get behind
there is no way you can catch up again!"
(Younger Science male)

"Yes, a lot. A much heavier emphasis on you. No set time for
learning. Didn't work that hard in 5th and 6th form but got
through fairly easily with good marks. If you don't work here;
if you slack off a little bit you fall behind. Different
assessment – must work continuously otherwise you can lose so
many of your marks early in the year. That's what shocked me
last year. Didn't work first semester and was falling behind.
Had to work really hard for the rest of the year to catch up."
(Younger Science female)

APPROACH TO STUDY CHANGED SINCE FIRST YEAR AT UNIVERSITY

As can be seen in Table 4 the majority of all groupings of these second year
students, except the Science students utilising surface level strategies,
reported that they were using a different approach to their study than they
had used in the early part of first year.

Once more those generally adopting deep level strategies usually reported
qualitative changes. The following comments illustrate the commonly reported
change to a deeper level approach:

"Yes – its made me think and not to accept something because its
in a book, say ... Having to put things down on paper, to get
everything together in a reasoned argument has been an education
for me ... Learning to think and to question, which I haven't
been doing for a long time."
(Older Arts male)

"Yes I'm learning how to put my argument systematically. Its not
a matter of knowing the answer but of being able to work your
way through opposing views, the argument. I've got to learn why
I think that way this year. Whereas last year, it was all so
new I tended to think – oh! I've got to get this essay done and
working out ways of doing it. Which is basically the same sort
of thing, on paper as against verba'ly. Learning how to think
I suppose, systematically ... basically that's what its all about."
(Older Arts female)

In contrast, those who were more likely to use surface level strategies tended
to report quantitative changes with most, but not all, reporting that they were
now working harder –

"Yes, I think it has. I'm using the library more, and using
a greater number of references."
(Older Arts female)

"Yes, because beforehand, though I was very keen to take on
tertiary studies, I was worried that maybe I wouldn't be able
to cope with it - pass it. But since coming here I've
realised you only have to put in a certain amount of effort
and you can get past."
(Younger Science male)

In addition, many of the younger students were grappling with a situation in
which they were expected to be <u>responsible for their own learning</u>:

"A lot different. At school you are spoon fed. A teacher
stands up the front and actually teaches you and stops and
asks questions and gives study examples but at Uni., usually
because the classes are so large, they stand up there and talk
at you, sometimes they stop to answer questions but you just
sit there, take what's down then you have to go home and see
if you understand it and if you don't its up to you to read
the text book and teach yourself. You can ask the lecturer
but usually you don't have time to let it all sink in straight
away so you have to go home and teach yourself again. You
couldn't go running to the lecturer after every lecture and
say I don't understand. You sort of teach yourself. I'd much
rather be back at high school but I'm getting used to it now."
(Younger Science female)

"At Uni., learning tends to be more up to you. At school you
were told what to learn and read. Even in 5th and 6th form
when you're given more freedom teachers have to get you through
that exam (HSC) and that's their big aim and your big aim. So
its virtually set what you do. I liked school a lot and sometimes
when I fail or I'm not doing well I wish there was someone to
tell me why or how I could improve it. I think perhaps I prefer
University. I think if there was a more gradual progression
into Uni., it would be better. If more freedom in 5th and 6th
form might be able to handle things a lot better ... maybe like
ACT where less emphasis on exams in College system."
(Younger Economics male)

ROLE OF OWN OPINION

Students generally adopting deep level strategies, particularly those in Arts,
were likely to report that their own opinions played a significant role in
their academic work (see Table 4).

Some illustrative comments were:

"In the sort of units I'm doing, its fairly important. Because
it'll always be a subjective opinion that you have - you can't
read everything and then sum everything up and form an opinion
that's totally consistent with all that you've read. Its always
influenced by what you are yourself - put your own little bias
on it. Because no matter what opinion you take you can always
find some supporting argument."
(Older Arts female)

"Yes - any development of knowledge of any sort depends to some
extent on the reaction between people in the discussion of
problems - even if its a teacher/student relationship ... the
student has a role to play in perhaps suggesting different
avenues and putting different lights on things. Its not only
teacher to student. Its also student to student. So your
own opinions have a role to play there."
(Older Arts male)

Most of the Science and some Economics students reported either that their
opinions were not applicable to their subject or that they were actively
discouraged from voicing them:

"Very hard to have an opinion about mathematics or one may have
an opinion but it doesn't really influence the fact that you've
got x amount of things to learn in contrast to politics or
English literature or something where your opinion on things
is quite influential and I suspect often gets in the way of
getting on with learning, but with mathematics its not
something one has an opinion about."
(Older Science male)

"We're not allowed to express personal views. Its all facts and
analysing things. My views haven't changed since coming to Uni.
They may have become more conservative."
(Younger Economics female)

Even in an Arts subject such as English some of the students felt they had
to be careful:

"In the English Department they want your thoughts. But I also
wonder how far you can go - because you can be completely wrong
and misunderstand it ... They allow for certain interpretations..
you have to back up your opinion."
(Older Arts female)

"In English you can express opinions but you must back them up
so it has made me cautious. I question my own opinions. I've
been marked down for abstract opinions so I feel opinions are
moulded at Uni rather than being cultivated. English tends
to say 'There is a definite response and there are no more'
whereas in History I don't feel crammed in so much."
(Younger Arts male)

IMPLICATIONS OF THE FINDINGS

Encouraging Deep Level Processing

While true understanding of any subject probably involves some degree of rote
learning there seems little doubt that an essential prerequisite for such
understanding is a deep level approach (Biggs, 1979; Marton and Säljö, 1976a, b;
Schmeck and Phillips, 1983; Watkins, 1983b).

This research indicates that deep level processing is associated with lecturers

(a)   not overloading a course and allowing a student time to think
      (they might not take the opportunity but at least give them
      a chance!);

(b)   assessing by essays rather than examinations;

(c)   actively encouraging independent thinking and allowing
      students some say in the way they go about their learning;

(d)   arousing interest not boredom in the content of their course.

These findings generally support the earlier research of Ramsden (1979) and
Watkins (1982a) and are, of course, familiar to most readers of texts on
educational processes.   However, this study also suggests that practices which
encourage deep level processing in one faculty may actually have the opposite
effect in another faculty.   The finding that higher quality teaching, as
perceived by the students, is related to deep level processing in Arts but to
surface level processing in Science and Economics is particularly fascinating.
However, there is a need for more research to be carried out in a wider range
of academic contexts before much credence can be placed in this finding.   In
addition, there is a need for such research to uncover causal relationships
rather than just simple relationships.

Conceptions of Learning

This research strongly supports the contention of Säljö (1979) that students
who generally utilise either deep or surface level processing strategies also
have quite different conceptions of the learning task.   Those who adopt
surface level processing seem to only consider learning in terms of how much
or how to arrange it.   They do not seem to have considered the qualitative
aspect.   For this reason 'learning to learn' group exercises (such as
suggested by Gibb, 1981) may be particularly important in raising the awareness
of such students.   Also it suggests that the deep-surface distinction is not
a simple matter of degree.   The use of the term 'deep' and 'surface' may be
rather misleading in this regard.   For this reason (amongst others) several of
the leading U.K. and Swedish researchers have recently agreed not to use them
in future - preferring to refer to 'approaches to learning' (Ramsden, 1982).

Locus of Control

Many of the students seem to feel that accepting responsibility for their own
learning is an important aspect of adjusting to tertiary learning.   Previous
research has indicated that such an internal locus of control for academic
pursuits is related to deep level processing (Schmeck, 1983;   Watkins, 1982b).
The writer is currently testing the hypothesis that an internal locus of control
is a necessary but not sufficient condition for deep level processing (2).
Certainly this would explain the relationship found between such processing and
giving students the chance to choose their own method of learning.   It would
also help explain why mature age students are more likely to adopt deep level
strategies than are recent school leavers - the latter being still too dependent
on others to show them how to go about their learning.

Personal Acceptance of Information

This study has found a relationship between deep level processing and voicing

one's own opinions about what is being learnt. However, as Ford (1980) argues, these aspects do not necessarily go hand in hand (see also Schmeck, 1982). The problem is that personal acceptance and valuing of information is a factor in long-term retention of at least some kinds of information (Ford, 1980). So courses where the students perceive that they are discouraged from expressing a personal view have little real impact on the students. However, it has not yet been shown that Ford's contention applies to disciplines such as mathematics, physics, or chemistry where personal valuing of information seems to be a rather different proposition than in the social sciences or humanities.

Research Methodology

This investigation has demonstrated both the existence and the significance of qualitative differences in Australian students' subjective conceptions of tertiary learning. Traditional psychometric research is not (as yet) capable of handling such differences and it was not, in fact, one of the major intended aims of this study (an illustration of the 'unexpected outcome' which can come from a more flexible approach to research). Thus, while the in-depth interview approach limits generalizability and is time consuming and labour intensive, it does allow investigation of what may well turn out to be the most significant aspects of tertiary learning. It is surprising that it has not been more widely used by Australian investigators.

NOTES

(1) At the University of Melbourne, 38 students were interviewed in connection with an extensive study of the learning experiences and attitudes of staff and students (Frederick, Hancock, James, Bowden, and Macmillan, 1981). However, these interviews were largely concerned with the value of a particular learning skills program rather than the students' views of their learning environment.

(2) The results to date suggest that this relationship may be true for Filipino but not Australian students.

ACKNOWLEDGEMENTS

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The Future of Higher Education in Australia: Ten Years On

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ABSTRACT

During 1975 a group of Monash University academics, who became nicknamed the "crystal ballgazers" began to meet with the aim of forecasting the future of higher education in Australia in the nineteen eighties and nineties. The predictions were published and by 1983 many of the forecasts had already proved remarkably accurate — and few, if any, of the pro-active strategies that were suggested as a way of influencing the future had been adopted.

This paper provides two retrospective analyses of that work. in the first we present some of the actual forecasts and their accord with reality, and then juxtapose the reasons for our forecasts upon the reasons being proposed now for the trends that have emerged. In the second analysis, we examine the failure of the work to influence the power brokers in Australian higher education to adopt a longer term and a more pro-active planning role.

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INTRODUCTION

> ... even if the propellor had the power of propelling a vessel, it would
> be found altogether useless in practice, because the power being applied
> to the stern it would be absolutely impossible to make the vessel steer.
> (Sir William Symonds. Surveyor of the British Navy, 1837.)

Forecasting the future can be a perilous endeavour. The reason that we
attempted it was not for the sake of prediction per se but in order to effect
change. As we said at the time, it was not our intention to predict a single
future for higher education in Australia, but

> ... to provide a basis for discussion and action for influencing the
> current complex trends in such a way as to lead to desirable futures.
> (Hore, Linke and West, 1978, p.283. Emphasis added)

Stated differently, what we wanted to do was to avoid some of the undesirable
futures that we forecast, we wanted to head them off, to make sure that they
did not happen. Berstecher et al., (1974) in their work as part of Project
Europe 2000 took a similar stance:

> The future is to be created, and before being created, it must be
> conceived, it must be invented, and finally willed, within an historical
> framework whose inertia and resistance must be evaluated correctly.
> (p.1)

As it turned out, we were most unsuccessful. Our predictions, many of which
ran counter to the then conventional wisdom, proved very accurate. Within
five years over ninety percent of the forecasts had proved correct. But our
impact as change agents was negligible. Few, if any, of the pro-active
strategies that were suggested as a way of influencing the future have been
adopted. Despite significant publicity and exposure we failed to influence the
power brokers. Why? We attempt to analyse that question in this paper. Not
in the sense of feeling rejected or unsuccessful, but because we hope that this
analysis will influence researchers to go further than creative speculation about
education and society in the future and address the task of ensuring that the
results of their research have an impact on the gate keepers of the higher
education system.

In considering the forecasts we make no attempt to be exhaustive and so
include only some illustrative examples. The full set is presented in detail,
together with discussion of their rationale in parts I and II of Hore, Linke and
West (1978).

THE FORECASTS

We are not interested, in this paper, in examining the processes whereby the
forecasts were reached. There were, however, two points in the process that
need identifying for our purposes here. The first phase concerned the likely
trends in what we called 'external factors', that is those that were outside

significant control by the higher education system. The second phase concerned the likely reaction of the various power groups within the system to the forecast trends in the external factors. The analysis involved in this second phase also identified some of the actions that the power groups could take to prevent undesirable futures. For convenience then, we will label these three outcomes of the work, the 'external factors forecasts', 'the systemic reactions forecasts' and the 'systemic change actions'. We note here, that we did not consider 'external change actions' since our target audience was the higher education system. Such actions have now begun to be taken by the Australian Government, not, we regret to say, as actions to forecast trends that were seen to be undesirable, but as reactions to the trends that have already occurred. We return to discuss these actions later in the paper.

External Factors Forecasts

Trends in important external factors were identified in three areas: the size and composition of future student populations; changes in the backgrounds of future tertiary entrants; and changes in the expectations about tertiary education by both the entrants and the community. As an illustrative example consider the forecasts concerning future participation by school leavers in higher education. Four trends were examined, the numbers of people in the relevant age group cohorts, the secondary retention rates, the tertiary participation rate of qualified school leavers (now called the transition rate), and the distribution of entrants across the various areas and disciplines. The most important of these trends was considered to be the transition rate. (West, 1978)

> A future lack of employment prospects for tertiary graduates (Birrell, Mann) is likely to lead either to a decline in the inclination of secondary school leavers to continue to tertiary education, or a general disenchantment with tertiary education in the community and a consequent cutback in funded places. Either will make nonsense of extrapolations from current and past tertiary demand patterns. When coupled with the nongrowth or decline in the pool of school leavers, this will lead to substantial decreases in the number of school leavers proceeding to tertiary education. (p.48)

The actual decreases that occurred can now be documented. The participation of 17-19 year-olds in full time higher education fell from 10.2 percent in 1976 to 8.3 percent in 1981. The overall apparent retention rate to final year in secondary schools stayed more or less steady (as we had forecast), although males and females behaved differently with the male rate falling from 34.6 (1975-6) to 32.0 (1981-2) and the female rate increasing from 35.3 to 37.8 over the same period. The most dramatic drop (again as forecast) was in the transition rate from school to university and college. In 1976, entrants to universities and colleges directly from school represented 54.3 percent of the number of students in final year of school in the previous year. By 1981 that had fallen to 42.0. This loss needs to be seen against a continued rise in numbers of students in final year at school during this period. (The figures in this paragraph are taken from Learning and Earning, 1982). These data are such common knowledge now, that it is hard to remember back to 1976 and appreciate that this expectation was not the common view. In January, 1976 we wrote to the Chairman of the Universities Commission sending him a draft of our forecasts and inviting him to contribute to the book. In a reply, in which he declined because of heavy commitments, he noted

> On the bottom half of page 5 you suggest that employment difficulties will cause a decrease in the number of students proceeding from school

> to tertiary institutions. ... I do not think there will be a decreasing
> supply of ex-secondary school entrants to tertiary institutions, although
> there may be a stabilisation in the proportion of school leavers who
> carry on to tertiary education. (Letter from Karmel to Hore, 29 January,
> 1976)

Similar optimism can be found in other sources. The Williams Committee
Inquiry into Post-Secondary Education and Training, published in 1979 used
several models for projecting future student numbers. Their projection 2,
which they saw as the most likely future (see p.78) included the assumption
that the percentage of the school cohort proceeding directly to higher
education would remain constant at the 1977 level.

The CTEC (Commonwealth Tertiary Education Commission) recently commissioned
a study to investigate the decline in youth participation in education. In the
report, known as Learning and Earning, the authors commented:

> 4.1 Ten years ago, in 1972, analysts of educational participation
> were looking back on more than a decade of strong and consistent growth
> at all levels of post-compulsory education, and were predicting - with
> well-based confidence - a continuation of that growth. Had foreknow-
> ledge been available of the major economic recession about to beset
> Australia, and of the severe labour market consequences of that recess-
> ion, particularly for the young, there is little doubt that the analysts
> would have been even more confident in their predictions: the deterior-
> ation in economic conditions would surely increase the incentive for
> young people to persist with their education, not only to improve their
> credentials and employment prospects in future years, but also to shelter
> somewhat longer from the realities of a tight and highly competitive
> labour market. (p.41)

This latter quote is most revealing. It illustrates that the conventional view
(amongst the decision makers) was that they considered that long term trends
have their own momentum and that the shelter effect was the dominating
relationship between education and employment. They had failed to take acc-
ount of the two other factors that we considered important - that the per-
ception of a differential in job opportunities and that the high status of higher
education (that is, being a higher education student) were also important. From
our perspective, it was difficult to understand the attitude of Australian politicians
to higher education. There seemed to be a deliberate attack, taken up by the
media, on higher education. To give some flavour of this attack, the following
quotes are taken from an article by Maxwell Newton in a weekend tabloid
paper in 1976 under the headline 'Cut the cash for Unis'.

> It is hoped that one of the early casualties of the Fraser Government's
> cost-cutting programs within the nation's socialist sector will be the
> inflated tertiary education apparatus which has developed in the last 20
> years. ... more and more graduates are finding it difficult to find em-
> ployment outside the Public Service. ...While more and more universities
> are built, it is evident that graduates are not necessarily superior re-
> cruits for jobs in business and industry. ...The Universities themselves
> become repositories for young people who end up there ...[so] that they
> may have the chance to postpone any actual work until they reach the
> age of 22.

The predictable impact of this campaign was to lower the status of higher education, to increase the disenchantment of the community with higher education, and to convince many potential higher education students that they should not bother to continue their education. The result was as tragic as it was predictable. Young people discontinued their education to enter a world of declining employment opportunities. Many of them became unemployed. At the same time, the institutions of higher education were able to maintain their enrolments by the increasing number of adults who were prepared to enter (also one of our forecasts).

By late 1982, when the downward trends or their implications were obvious, the government of the day reacted by funding an advertising campaign to encourage students to stay on. This really typifies our failure. We forecast correctly what was to turn out to be an undesirable future, but were unable to convince the power groups to take early action. In the end, an ad hoc 'band aid' reaction when the predicted future had become the present, was the strategy adopted.

Systemic Reactions Forecasts

Forecasts of the likely reactions of the various parts of the system included the following groups: the government, institutions of higher education, academic staff associations, employers and students. Once again there were many predictions that proved correct. For example, King, writing about the reactions of institutions, suggested that capital works would decline and that staff renewal policies would include non replacement and increased use of limited term positions. This he saw as part of the defense mechanism of entrenched empires.

> Almost certainly, however, the last areas to be affected by contraction across the sector will be those in which absolute numbers of tenured staff are involved; that is, departmental empires are likely to be preserved at the expense of other sections of budgets and of capital works budgets. (p.72)

This has been exactly the situation. Despite two reports, one prepared for the Australian Vice Chancellors Committee (Myers, 1979) and one ' pared for the Federation of Australian Staff Associations (Spaull et al, 198, .d a number of papers (Campbell, 1977; Hore, 1978; West, 1981) pointing out the dangerous consequences of these policies and suggesting various alternatives, little has been done other than King's predicted reactions. It has taken until 1983 for most institutions to begin to consider early retirement and fractional appointment schemes. There have been few attempts to liberalise leave without pay provisions, to encourage secondments, to introduce incentives to staff to accept retrenchment, and so on. Australian universities and colleges have now reached the stage where there are virtually no career paths for young people to enter academe, few opportunities for sideways movements, and an age distribution of academic staff that promises to act as a blocking group for at least the next decade.

Systemic Change Actions

As stated in the introduction to this paper, the reason for forecasting the future was to prevent the occurrence of certain undesirable futures. This message was articulated frequently, indeed, the final editorial comment of the

Hore, Linke and West book was:

> Our intention has been to provide a stimulus for those involved in ter-
> tiary education to take a more positive approach to planning its future
> development and at the same time to consider the likely implications of
> these future directions. It does not matter whether the reader accepts
> or denies the authors' views; it is important only that the reader ac-
> knowledges the need to act to shape the future. (p.283)

Within the spirit of this approach, several attempts were made to point to
examples of pro-actions that the higher education system could take to avoid
undesirable futures. Many of these concerned a longer term than five years
(e.g. the changing roles of universities and colleges), but there were some short
term. One of these was mentioned above in innovative staffing strategies
(although these were made in separate publications). Another was to evolve
'bridging courses' for under-prepared students. Changes in the backgrounds of
school leavers were seen to create serious problems for higher education, and
the use of bridging courses seemed an appropriate solution (Mainsbridge, 1978).
A classic example has emerged as the government has forced cut-backs in
teacher education. What was to happen to the students who previously took
teacher education courses? Their backgrounds were generally in humanities
areas so how could they change to science courses? In the State of Victoria,
the CTEC cut student load in teacher education in the college sector from
14,818 to 12,000 from 1981 to 1984. What happened to these 2,800 plus stu-
dents? Probably they dropped out of higher education and contributed to the
transition rate decline mentioned above. Could they have been captured by
science or technology courses if bridging courses had been provided? In Vic-
toria we will never know, for, sadly, no such courses were offered.

IMPACT

It has been indicated that the predictions made against the prevailing attitudes
of the day were accurate, and yet the study had almost no impact on policy at
any level of the educational system or government. Why was this so? Why
couldn't we reach the policy making bodies; and, assuming we had, was our
aim of prompting such policy-making groups to take action on these issues,
rather than wait until circumstances forced them to react, a reasonable aim?

Dissemination

It would be facile to say that the book was not well marketed and therefore it
did not receive the penetration or publicity one might have expected. Or, that
the authors had no 'clout' in the policy and planning areas of education or
gover nent and therefore their pronouncements failed to attract publicity and
comment. There are elements of truth in both these statements, but we be-
lieve there were deeper psychological reasons for the non-acceptance of our
findings. The zeitgeist was one of optimism. The predictions being made
could be dismissed as temporary aberrations. Any message dissonant with the
prevailing view was either ridiculed or ignored. In this arena we would have
prefered ridicule since this, in itself, may have attracted publicity and debate.
Secondly, politicians and particularly administrators of educational institutions
had become used to growth and were not experienced in recognizing decline
and even less experienced in managing it. Contraction was an unknown word
and politically unacceptable to tertiary institutions. Around the time of pub-

lication of our book there was also an air of expectancy, hoping that the re-
port of the Committee of Inquiry into Education and Training, set up in Sep-
tember 1976 would provide a major blue-print for future development. (The
Report was tabled by the Prime Minister on the 22nd March 1979 and did not
substantiate those expectations).

One could summarize this section by saying that the residual buoyant feelings
from previous years of growth rejected all data which did not buttress those
attitudes.

Is Pro-action Possible?

The second question of interest is whether any administrator or institution
could have acted pro-actively in order to ameliorate the effects of any set of
circumstances, or whether the only course open to them was one of reaction
after the event? Reflecting on this question made us realize that we had not
been engaged in academic 'crystal ball-gazing' per se but in the exploration of
planning possibilities at political policy levels. Pro-action is political action
and few administrators were strong enough to lose something they already had
(institutional autonomy) to gamble on a course of action (a merger with an-
other institution) for some potential future benefits (increased power of the
larger amalgam, and control over the nature and extent of the merger). In
times of growth administrators encountered little risk, the distance between the
lines of growth and resource allocation was very small and one could jump
comfortably within that area. But when the lines of growth and resources
diverge; one following a growth trajectory fired in the past, and the other
plotted by current financial allocations, the distance between these lines rapidly
widens and the risk associated with pro-action increases proportionately.

With early information, small leaps with small associated risks are possible. As
King (1978) noted:

> In times of growth and expansion, the individuals and sub-groups who
> populate institutions and systems are inclined to accept and increase
> their own power bases in rather cavalier fashion. Furthermore, they are
> likely to be of friendly disposition, bordering on generosity, towards
> those who in different circumstances might be viewed as competitors.
> When growth has become a habit resentments are few and, during the
> 'power shower', friction is usually isolated to irregular demarcation prob-
> lems. (p.68)

But a lack of information or a disbelief in information provided will deny even
this possibility. Any later actions are accompanied by increasingly greater risk
and a decreasing probability of occurrence. Change in this case can only be
prompted by a political act such as the actions of the Federal Government
(which became known as the 'Razor Gang' Report), in 1981, which forced cer-
tain actions through a manipulation of the purse-strings.

IN RETROSPECT

Information about the future is not sufficient in itself no matter how accurate
it is. Researchers must have access to the political policy makers and vice-
versa through the establishment of independent advisory groups to inform and

advise the Government's advisors. In this way, potentially painful consequences, can be averted through the presentation of information about possible futures to enable pro-action or even reaction to occur, when diverging trends are still relatively close together.

THE PRESENT

Higher Education may now be entering yet another new era. There is a sharp upturn in the transition rate and in Government attitudes towards higher education. How does this sit with the earlier predictions, and what contribution has this paper to make to this new era? We certainly did not anticipate a sharp upturn. Nor did we anticipate what appears to be its major cause - a dramatic collapse of the youth employment market. A general decline in youth employment opportunities occurred during the period 1973 to 1981 (see Learning and Earning, chapter 3) and is one of the factors that contributed to enrolment patterns in higher education. However these declines might be seen as 'relative stability' in comparison to the collapse in the twelve months to January 1983. In that period as Grant (1983) commented:

> ...just on 80,000 of the full-time iobs held by teenagers at the beginning of 1982 have disappeared ... There is nothing seasonal or statistiscally quirkish about these figures: the trend they represent is real and unambiguous, and a sharp contrast with the relative stability of youth employment levels up to late 1981 ... They mean, in short, that economic recovery when it comes, or job creation schemes, beforehand, will need to provide an additional 140,000 jobs for the 15-24 age group alone if they are to restore even the same level of full-time employment which applied in early 1982. (p.1)

The other major cause is political. The previous government, in its final months, and the present government have realized the political handicap of declining tertiary participation. The political goals are now to increase the transition rate. Stripped of the rhetoric, however, this may simply mean that post secondary education is to become the reservoir holding back youth from unemployment.

Are both of these causes of the new era, merely reactions? Is post-secondary education becoming the default option of young people? Will the dam wall hold? Will there be any jobs for those now sheltering in increasing numbers in the higher education system? There are a range of undesirable futures that we need to forecast now, and more importantly, we need to devise pro-active strategies aimed at avoiding these futures.

We fear that the new era will be accompanied by a new complacency, a relieved, brow-mopping 'Thank God that's over' attitude. Now may be the time for a new 'Future of post-secondary education in Australia' study. But is it worth it? Will anybody notice?

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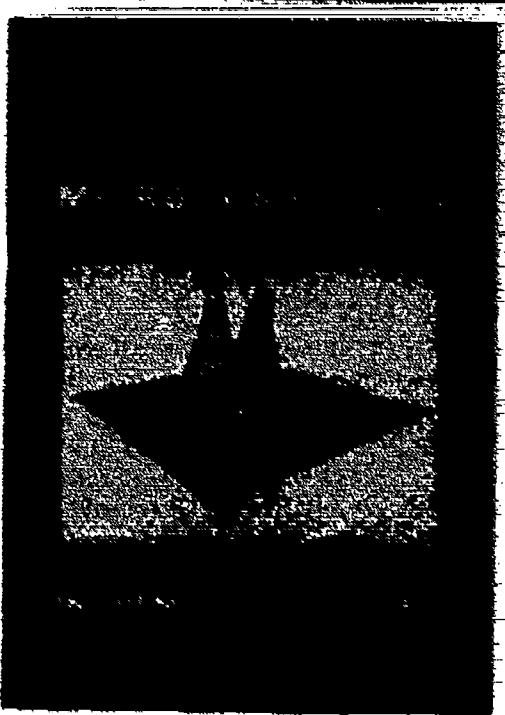
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The Age Factor in the Prediction of Tertiary Academic Success

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ABSTRACT
This study examined the predictive power of age in the academic performance of Behavioural Science students at the Darling Downs Institute of Advanced Education. Other predictor variables included were study methods, Tertiary Entrance score, personal problems, satisfaction with college, self-concept, locus of control and flexibility of thinking. 79 students, 93% of the total population, responded to the questionnaire containing scales measuring the above variables. Results from multiple regression analyses showed that the contribution of age outweighed by far that of any other variable. The next best predictors were study methods and environment factors. The contribution of personality traits and T.E. score was minimal. A high correlation between age and study methods was also noted. A greater acceptance of older age students into Behavioural Science courses was suggested.

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Over the past few years the number of mature age students in universities and colleges of advanced education has increased significantly. As this trend is expected to continue for some time, it seems inevitable that the mature age student body will rapidly become an important part of the tertiary education scene. The most dramatic increase in enrolments of mature age students has been in courses of Arts, Social Sciences and Humanities (e.g. Foster, 1979; Isaacs, 1979). This particular college, Darling Downs Institute of Advanced Education (D.D.I.A.E.), is no exception: 1981 Behavioural Science enrolment figures show that over 60% of the students are not of traditional entry-age.

As to the performance of mature/older age students, many Australian researchers (e.g. West, 1981; Barrett & Powell, 1980; Boon, 1980) have reported that they perform as well as younger age students, or even better. The above studies, however, have made no attempt to make quantitative predictions and simply employed descriptive analyses in their investigations.

An earlier study by Hong (1981), which has made use of multiple regression analyses, investigated relationships between academic achievement and various personality traits, environment and high school performance variables. Correlations between these variables were low, however, and explained only 24% of Grade Point Average (GPA) in Behavioural Science students, leaving over 75% of GPA variance unexplained. In the same study, Tertiary Entrance (T.E.) score was found to be a less powerful predictor than study methods or environment variables, whereas traditionally this variable has been a single best predictor of academic performance (e.g. Watkins, 1979). This observed difference could be partly explained by the age factor in the samples of different studies. For instance, the sample in Hong's study was composed of a larger proportion of mature age students as compared to younger age students. To date it seems that the only study (Astin, 1975), which has used the age factor as a predictor variable, reported a negative association between age and academic success. This strongly contradicts the results of recent Australian studies reviewed earlier.

The main objective of this study, then, was to examine the predictive value of the age factor in the academic performance of Behavioural Science students at a regional college of advanced education. Variables from the earlier study (Hong, 1981), namely study methods, T.E. score, personal problems, satisfaction with college, self-concept, locus of control and flexibility of thinking were also included in the present research. Relevant literature referring to these variables other than age have been reviewed in the earlier study and elsewhere (Watkins, 1979).

METHOD

Subjects

The subjects used in this study were first, second and third year students enrolled in the Behavioural Science degree course at D.D.I.A.E. who volunteered to participate and completed the relevant questionnaire. A total of 79 students, 24 males and 55 females, majoring in psychology were involved, and represented 93% of the total Behavioural Science population. This sample included both younger age and mature age students, ranging between 17 and 45 years with a mean age of 24.8 years.

Instruments

The eight predictor variables used in this study were measured by the following scales:

1. Self-concept - Twenty items from the Self-concept questionnaire (Hong, 1978).

2. Flexibility of thinking - Ten items from the New England Personality Inventory (Fitzgerald & Cole, 1976).

3. Locus of control, or the extent to which subjects see their lives as internally (self) or externally (other) controlled: Ten items from the Rotter scale (Rotter, 1966).

4. Satisfaction with college - Ten items designed by the author to assess the degree of satisfaction with the college environment and attitude towards the course of study.

5. Personal problems - Five items from a survey on prevalent personal problems of D.D.I.A.E. students (Gooch, 1980).

6. Study methods - Eleven items from the Study Methods Questionnaire (Entwistle, Nisbet, Entwistle & Cowell, 1971).

7. Tertiary Entrance (T.E.) score - A Queensland measure of high school academic achievement obtained from the D.D.I.A.E. Student File.

8. Age - Students' indication as per the front page of the questionnaire.

Responses on the first six predictor variables were made on a seven-point rating scale. A high score on each of the scales with the exception of the personal problem scale was indicative of the positive attributes of that particular dimension. The test-retest reliability coefficients for the first six subscales were satisfactory and ranged from .66 to .89 with an interval of two weeks. In the present study, variables 1, 2 and 3 were grouped together as a personality factor, and variables 4 and 5 as an environment factor. As a result of the earlier study (Hong, 1981), variables 6, 7 and 8 were each considered as a separate, independent factor.

Procedure

The questionnaires were distributed to all Behavioural Science students in regular class periods over two semesters in the 1980 and 1981 academic years. In order to obtain relevant academic results and T.E. scores, students were required to identify themselves by name. Thus, prior to answering the questionnaire, all students were specifically assured of the strict confidentiality of their responses.

Results of all academic subjects, obtained from the Student File at the end of each semester, were converted into a single numerical score, namely Grade Point Average (GPA). The GPA was the weighted average of the grades obtained by students in each academic subject, using the following scale: Incomplete = 1; D (terminal pass) = 2; C (pass) = 3; B (credit) = 4; A (distinction) = 5.

Results

Table 1 shows Pearson correlations between GPA and the eight predictor variables. Significant intercorrelations among predictors are also included.

Table 1. Significant Correlations among GPA and Predictor Variables.

Predictors	GPA	SM	PRB	SAT	LOC
Age of subject	.45**	.46**		.25*	
Study Methods (SM)	.37**		-.46**		
Personal Problems (PRB)	-.35**				-.28*
Satisfaction with College (SAT)	.25*	.33**	-.26*		
Tertiary Entrance Score#	.25*				
Self-concept	.08	.35**	-.41**	.29*	.27*
Locus of Control (LOC)	.19				
Flexibility of Thinking	.06				

included only students with TE score.   * $p < .05$,   ** $p < .01$

The GPA was found to be significantly related with five subscales: age,
study methods, personal problems, satisfaction with college and T.E. score.
Of these variables, age had not only the strongest association, but was also
positively related to GPA. Age was also significantly correlated with study
methods and satisfaction with college. These relationships suggest that
older students tended to have higher academic achievement, better study habits
and skills, and more satisfaction with course and college environment.
Correlations among the predictor variables and correlations between GPA and
other predictor variables follow a similar pattern to those reported earlier
(Hong, 1981). It is noteworthy to mention, however, the lack of relationship
between GPA and the three personality traits, and between T.E. score and the
other predictor variables.

In assessing the predictive value of the age factor in academic performance,
multiple regression can be employed in three different ways. Firstly, all
the variables except age are included using the stepwise procedure with the
age added to the last step (partial stepwise analysis). Secondly and more
fairly, the predictive value of each individual factor can be calculated
separately and then compared (independent analysis). Thirdly, a simple
stepwise regression analysis can be performed with all predictor variables
including age (complete stepwise analysis). In the present study all three
methods were used. Table 2 presents the summary of the multiple regression
analyses in order of the three combinations described above.

Table 2. Summary of Multiple Regression Analyses of Predictor Variables with Grade Point Average in Various Combinations.

Analysis type		Predictors	R	R^2	R^2 change	F**	sig.
Partial stepwise	1*	Study Methods	.369	.136	.136	14.32	.001
	2.	Environment	.436	.190	.054	5.68	.05
	3.	TE Score	.471	.221	.031	3.26	.10
	4.	Personality	.491	.241	.020	2.11	
	5.	Age	.579	.335	.094	9.89	.01
Independent analysis	1.	Age	.449	.202		19.49	.001
	1.	Environment	.388	.150		6.72	.01
	1.	Study Methods	.369	.136		12.13	.001
	1.	TE Score	.246	.060		4.91	.05
	1.	Personality	.191	.037		.95	
Complete stepwise	1.	Age	.449	.202	.202	21.26	.001
	2.	Environment	.538	.289	.087	9.15	.01
	3.	TE Score	.568	.322	.033	3.47	.10
	4.	Personality	.578	.334	.012	1.26	
	5.	Study Methods	.579	.335	.001	.10	

* Number indicates the order of inclusion in the analysis.

** F-ratios were obtained using the hierarchical decomposition method (Nie, et al., 1975)

The multiple correlation (R) between GPA and the predictor variables was .579, that is, 33.5% of the GPA variance was accounted for by these predictor variables. The overall F-test for the multiple correlation was statistically significant at the .1% level (F = 4.40).

In the partial stepwise analysis, the age variable increased the prediction of academic performance by 9.4% which was significant at the 1% level. This increase is the unique contribution by age excluding its shared variance with the other variables. Among the other variables entered in the analysis before age, only two factors, study methods and environment, significantly increased the prediction of GPA (13.6% and 5.4% respectively).

In the independent analysis, the multiple R of GPA with the predictor variables ranged from .191 to .449. The age variable here was found to be the most powerful predictor, explaining 20.2% of the GPA variance. This was followed by environment (15%), study methods (13.6%), T.E. score (6%), and personality (3.7%) in order of their contribution. Personality was the only factor whose

contribution was not significant.

As in the independent analysis, age was again found to be the best predictor
in the complete stepwise analysis, and was significant at the .001 level.
The contribution made by environment (8.7%) was also significant (p<.01).
However, T.E. score, personality and study methods did not make a significant
contribution to the prediction of GPA.

It is worthy of note that in the complete stepwise analysis, the predictive
value of study methods was dramatically reduced as compared with its
contribution in the partial stepwise analysis. This could be explained by
the significant correlations of study methods with age, satisfaction with
college and self-concept, indicating that nearly all of the contribution of
study methods was, in fact, already accounted for by these three variables,
and in particular, by age.

DISCUSSION

Of the independent variables, age was found to be the best predictor of
academic performance in Behavioural Science students. Its unique contribution,
even after the inclusion of all other variables in the partial stepwise
analysis, was still significant. This finding is somewhat contradictory to
that of an American study (Astin, 1975) which indicated a negative relationship
between age and academic success. However, the present finding is in line with
many Australian studies reporting that older age students on the whole are
likely to perform as well as (West, 1981; Barrett & Powell, 1980; Boon, 1980)
or better than younger age students (Eaton & West, 1980; Isaacs, 1979).

The better performance of the older age students could be explained, first, by
their higher motivation and determination to succeed in their study as compared
to younger age students. As evidence of this, many researchers (e.g. Boon,
1980) have reported these students as having few motivational problems and as
being conscientious and hard working in their approaches towards study. The
fact that older age students undertaking tertiary study generally enter self-
selected courses, and are most willing to make considerable personal sacrifices
may well explain their high motivation and determination. Secondly, older age
students on the whole have the distinct advantage of accumulated knowledge and
experience due to maturity, referred to by Knox (1977) as 'crystallized
intelligence', which would enhance their academic performance, and be useful
particularly in the study of Behavioural Science. Thirdly, a large proportion
of older age students undertake their studies on a part-time basis. The
observed difference in the academic performance of these students may be a
function of their different attendance patterns. There is considerable
evidence of part-time students performing better than full-time students (e.g.
Butterfield & Kane, 1969). All part-time students in the present study were
older age students (21% of total sample). However, this number was considered
too small to be analyzed separately according to type of enrolment.

If this trend of better performance on the part of older age students can be
shown to be typical of psychology students attending colleges of advanced
education, there should be no longer any concern over the admission of
unmatriculated mature age students into a Behavioural Science/Psychology
programme. It could also be suggested that less reliance be placed upon the
traditional criteria for selecting new students. A similar conclusion was
reached in a study by Smurthwaite and her colleagues (cited by Eaton & West,
1980) at Monash University:

> What was initially seen as a gesture on the part of
> (tertiary educational institutes) to helping under-
> privileged or disadvantaged individuals may now be
> viewed as a means of selecting a group of able students
> making a considerable contribution to the (institutes).
> (p. 60)

While keeping in mind that not all older age students will perform better than
students straight from high school who may have similar intelligence and
motivation, it is reasonable, nonetheless, to state that older age students
generally perform better than younger age students.

In the present study, older students were also found to have considerably
better study methods than the younger age students (r = .46, p< .01). This
relationship is clearly shown in the complete stepwise analysis, where the
contribution of study methods to the prediction of GPA was reduced dramatically
mainly by the age variable which took the larger part of the shared variance
between study methods and the other variables. The high correlation between
age and study methods is a surprising finding in view of the common assumption
that older age students have poor study skills, perhaps due to their sudden
change in adjusting to the demands of study, and to their inexperience in the
use of academic library materials, note-taking and essay writing. These
initial difficulties and anxieties, in fact, are experienced by all older age
students to varying degrees. However, once they are accepted to a college,
their enthusiasm, maturity, determination and high motivation would seem to
provide them with a greater capacity for overcoming these problems. They
readily take on responsibility for their own learning by organizing their time
efficiently and developing good study habits. Barrett and Powell (1980) also
reported results similar to the present study, using interview data with
students from an Australian university.

The study methods variable was, in turn, significantly related to GPA
(r = .37, p <.01) and was the best predictor of GPA among the seven subscales
when excluding age from the partial stepwise analysis. This finding is in
line with those of many previous studies (e.g. Watkins, 1979; Entwistle &
Entwistle, 1970; Entwistle & Wilson, 1970). Although it is commonly assumed
that good study methods contribute considerably to students' academic
performance, the pattern of the present results with the study methods variable
seems to be peculiar to Behavioural Science students. Earlier research (Hong,
1981) showed quite a different pattern of results when using the same variables
with Creative Arts students. Other studies which investigated the importance
of study methods in the prediction of academic performance have also reported
inconsistent relationships with students from different courses of study
(Biggs, 1970a, 1970b; Goldman & Warren, 1973), and from different types of
tertiary institution (Entwistle & Entwistle, 1970). The results of the
present study strongly imply the value of courses in study methods but, as
suggested by previous researches, study methods may have to be designed to
suit different courses of study.

Three findings in the present study seem to be of interest and open up further
research possibilities. Firstly, the environment factor consistently showed
significant contributions to the prediction of academic performance in all
three analyses. This suggests that students who are satisfied with the college
environment and the course of study, and who have less personal problems, are
more likely to succeed in their study. Of the two subscales in the environment
factor, personal problems (r = -.35) was more strongly linked with GPA than
was satisfaction with college (r = .25). However, the latter variable was, in
turn, significantly related to study methods, the strongest predictor of GPA

other than age. This is indicative of an indirect influence of the satisfaction
with college variable on GPA. Taking these results into consideration, it
would appear that the availability of efficient and practical counselling
services and the presenting of a more structured orientation programme about
the college and course would have a positive impact on academic performance
of students.

The second finding which also seems worthy of mention is the personality factor.
In the present study, this factor is a combination of three personality traits:
self-concept, locus of control and flexibility of thinking. The results from
all three analyses (Table 2) suggest that these personality traits are not
useful in predicting the academic performance of Behavioural Science students.
Looking at the pattern of correlations, all traits appeared to have non-
significant relationships with GPA. These nonsignificant relationships could
partly be attributable to the particular type of personality measurements
employed in this study. Nevertheless, the present findings are in accordance
with results of a recent Australian study (Watkins, 1979) involving Arts
students at the University of New England. However, it should be noted that
self-concept variable was significantly related with both study methods and
environment variables which were the best two predictors of GPA in the
partial stepwise analysis, thus suggesting an indirect relationship between
self-concept and GPA via these variables. Complexity in relationships between
personality traits and academic success was also reported by Biggs (1970b)
and Entwistle and Wilson (1977).

Thirdly, finding that the predictive power of the T.E. score was not as strong
as that of age, study methods and environment factors is somewhat disappointing
in view of many reports of high school performance being the single best
predictor of tertiary academic achievement (e.g. Watkins, 1979; Astin, 1971,
1975; Entwistle & Entwistle, 1970). In fact, even when this variable was
entered in the first step as shown in the independent analysis, it accounted
for only 6% of the GPA variance. It should be noted, however, that the sample
used in the present study contained students in all three levels of study,
whereas the majority of other research employed first year students only as
their subjects. Although the contribution of the T.E. score to the prediction
of GPA was not as strong as expected, it was significant at the 5% level.
Furthermore, T.E. score correlated significantly with GPA only and with no
other predictor variables. This indicates the value of the T.E. score as an
independent and unique predictor of tertiary academic performance.

In conclusion, the high predictive power of the age variable in academic
performance strongly suggests the need for a more positive commitment by
tertiary institutions to the liberal acceptance of older students in psychology
or behavioural science courses. Although many tertiary institutions have
already adopted a more relaxed attitude towards the admission of mature age
unmatriculated students, the present finding, which is in keeping with evidence
from recent Australian studies, strongly advocates that there is definitely no
longer any basis for arguing against the entry of older age students into
higher education on the grounds of their performance.

It should be borne in mind, however, that these results are clearly suggestive
rather than conclusive, due to the fact that the sample was relatively small,
even though it represented 93% of the Behavioural Science population at D.D.I.A.E.
Further research from other colleges and universities, therefore, is desirable.
Nevertheless, the importance of age, study methods and environment variables in
predicting academic performance should be stressed.

ACKNOWLEDGEMENT

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Collaboration Between Two Universities
In Course Development

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ABSTRACT

In 1981 it looked as though there could be collaboration between Deakin University
and the University of Queensland in the co-development of courses leading to a
Master of Education degree to be offered externally and by course work. It was
hoped that there would be joint development of three courses — about half of the
minimal degree program. In the event, only one of the three courses was produced by
intensive co-development. The present study is an investigation of factors involved in
the collaboration, and consequently of issues involved in any such enterprise. It is
concluded that a collaborative venture is likely to succeed if it is based on a
collegiate network, or on a good working relationship between academics who share
research and teaching interests. It is also suggested that such collaboration can best
be fostered by establishing a climate within and between institutions in which
particular collaborative initiatives can be initiated and sustained. Finally, it is
suggested that collaborative co-development and co-production and parallel
provision of courses may offer a way out of the dilemma of collaboration for
excellence in teaching versus institutional self-interest.

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METHOD

This report is a critical documentary history of the collaboration from 1981 to the end of 1982. It is based on information gather by two techniques.

Interviews

Interviews were conducted by the evaluator (the first author) with people involved in the collaboration at both institutions. They included both academics who actually co-developed a course, others who negotiated co-development but did not proceed with it, and also administrators who had a range of relevant insights at the macro-level. Information gathered in this way has been edited and written up by the evaluator.

Observation

The evaluator of the present study was also the course developer (instructional designer) on the course which was fully co-developed, and also the course evaluator. As a member of the course team he had an opportunity to observe and was also a participant in most aspects of the development, production and evaluation of the course in Case study methods.

INTRODUCTION

Negotiations began in 1981 between the University of Queensland and Deakin University to arrange co-development of courses leading to the M.Ed. degree. Although at that time there was very little evidence of co-operation of this kind, there were external pressures on institutions to consider such possib- ilities. Both the Universities Council and the Advanced Education Council had recommended a greater degree of collaboration between institutions, though the rhetoric of the Tertiary Education Commission has been more concerned with a rationalisation of programs, than with co-development at the level of courses. Thus there have been recommendations, by the Ralph Committee (1982) for example, for the centralisation of programs on a limited number of schools. There has not been, however, much advancement in the areas of course sharing, student sharing, or concurrent enrolment. CTEC has preferred to exert pressure on universities through its funding arrangements, and by setting up special committees like the one that produced the Ralph Report, and Professor Johnson's investigation into external studies.[1] There seems to be little overt concern with the possibilities of improving the quality of individual programs and modes of teaching, nor with increasing the range of possibilities for individual students, which would seem to be the basic academic arguments in favour of inter-institutional collaboration. The Australian Vice-Chancellors Committee has only very recently become interested in collaboration between universities in external studies (and this only under pressure from the Universities Council), an interest which is reflected in some aspects of 1985-7 triennial submissions.

At Deakin, there is a long-standing commitment to inter-institutional co- operation wherever this is in the interests of students. This climate of receptivity to co-operation has prompted a range of collaborative ventures, and provided a basis upon which the developments reported in this paper could be initiated and evaluated.

MODES OF COLLABORATION

'Collaboration', as Moran and Charlesworth[a] have set out, 'can take a variety
of forms, including:

- joint course development by two or more institutions, for use in each
  institution - e.g. a masters course in curriculum developed by Deakin
  University and University of Queensland.

- preparation of a course by one institution for use elsewhere - e.g. a
  Social Psychology course now available in Deakin's BA and in the Criminal
  Justice program at Phillip Institute of Technology.

- course development separately by two or more institutions to make up a
  coherent sequence or program - e.g. a Women's Studies sequence proposed
  by staff of Deakin, Murdoch and Queensland Universities.

- courses developed and sold by one institution to others here and overseas
  - e.g. as are some Open University courses. Discussions have been held
  between Deakin and several overseas institutions towards this end.[3]

- sharing of production facilities to achieve improved quality and economies
  of scale - e.g. discussion now under way between Deakin University and
  RMIT.

- courses prepared by Deakin employing external (Australian and overseas)
  consultants to write significant proportions - e.g. the MBA courses.

- provision for students to enrol concurrently in courses or electives
  from separate offerings of more than one institution.

THE PRESENT COLLABORATION

The initiative for collaboration in the first collaborative venture of interest
for the present study was provided by the academics themselves. Leo Bartlett,
at the University of Queensland, and Stephen Kemmis, at Deakin, became aware
in 1980 that each was setting up a course in case study in education and needed
to organise teaching material especially for distance (or external) students.
It seemed obvious to them that here was a possible collegiate relationship to
promote co-development. This was a successful collaborative enterprise which
gave rise to the Case study methods course, the development of which is
detailed below.

In the absence of precedents, they also thought that it would be a good idea
to study the collaboration process and to seek institutional support for it,
and so set up the research which led to the present report. Support for the
research was requested from the Commonwealth Tertiary Education Commission,
but, although informal interest was shown, a grant was not forthcoming.
Financial support for the travel needed for the study was given by an internal
research grant from both universities.

The second venture was in the area of social and administrative studies in
education. In this case, preliminary talks were held between lecturers in the
area, but co-development did not proceed, due to a lack of academic consensus.

Although there was an initial openness to the notion of a collaborative team being built up, in the event the specific initiatives being undertaken at the two universities did not seem compatible. There were fundamental disagreements between the academics concerned about the character and content of courses in educational administration at the Master's level, perhaps even about the nature of educational administration itself. Moreover, there was some nervousness about the comparability in levels of work: Deakin's M.Ed. could be done in one year full-time, Queensland's degree is longer; and Queensland's M.Ed. apparently builds on a prior five years of academic study, while Deakin's requires only four. The Queensland academic involved saw this as a barrier to offering collaboratively-developed courses at Queensland.

In the case of the third collaborative venture, in the area of teaching and learning processes, it was more a problem with timing than a lack of agreement. Professor Glen Evans, at Queensland, had been offering an M.Ed. course to internal classes in the area prior to 1981 when it was decided to offer the degree externally, including this course, with the relatively short lead-time of three months. Deakin, meanwhile, had begun planning the course in The nature of teaching and learning for first offer in 1982. Professor Iain Wallace at Deakin was aware of a common research purpose with Professor Evans. When this became a common teaching objective, they thought that it might be possible to make some direct use of this research in teaching. Consequently, Professor Evans visited Deakin to work as a consultant with the course team there, bringing with him some of the reading material which he had developed with a colleague for possible inclusion in the Queensland off campus course. Some of this material was subsequently included in the Deakin course, but no further consultation has taken place to this time, although this remains quite possible.

The only successful intensive co-development to date has been the Case study methods course, and it is therefore this course which itself becomes the subject of a case study.

Development

The development and production of the Case study methods course generally proceeded according to 'the Deakin model' which is similar in many ways to the Open University approach (though it is debatable whether the diverse approaches to course development at Deakin can be collected under a single rubric). The two academics, one from each university, formed a course team which met at Deakin for a period of intense activity in August 1981. Whereas it is normal procedure for a Deakin course team to meet over a period of a year or more, in this case the development period was only about six months, with a short burst of about one week of really intensive work, during which the team of two finalised the essential structure and content of the course. It is also unusual for the course team to be so small. This created problems at Deakin for the long-term maintenance of the course (i.e. teaching in subsequent years) in that the course team was effectively reduced to one whereas most Deakin off-campus courses have larger course teams and teaching staff.

Working on Stephen Kemmis' living-room floor in Geelong, the two made final selections of the readings to be included in the course. About one hundred and fifty potential items (articles, chapters, whole books) were considered for inclusion. Copies were spread out on the floor, other items marked by sheets giving their references. Nearly all were physically present. Much of the material collected was still 'fugitive': conference papers and others not yet published. Bibliographies (the collaborators' own and others they had

collected from colleagues in the field) were scrutinised for other potential
items. The selection was ordered and reordered several times, and a final
structure agreed. Around this structure, draft study guide material was
written and assignments designed. Following the precepts and principles of
the Case study methods course itself, a tape recording was made of almost all
of the twenty hours of intensive work, and Leo Bartlett took a series of
photographs of work as it proceeded.

There were several meetings prior to and after this intense development period,
and a good deal of correspondence: it is clear that the two academics involved
had closely parallel ideas about the likely substance and pedagogy of a course
in the area. In part, this may be because both had worked fairly intensively
(though at different times) at the Centre for Applied Research in Education,
University of East Anglia, which is a recognised centre of excellence in the
area of case study methods.

As this was a masters level course, it was decided to design an open-ended type
of structure, with a large number of readings and a minimal degree of guidance
to encourage self directed student learning. The open-ended type of structure
was one of several principles of design in the development of the course.
Another was based on the notion of issues structure. (An issue in case study
methods is something about which we can or might disagree with within a given
set of contextual conditions). Issues were grouped under four major headings,
'Epistemological Issues', 'Evidentiary Issues', 'Issues in the Collection and
Management of Data' and 'Political and Ethical Issues'. The readings were
organized into seven booklets using this framework. It is probably significant
that the original idea of an issues structure for course design was based on
the scholarly activity of the authors and colleagues at the Centre for Applied
Research at East Anglia. The idea was first trialled by Leo Bartlett in 1981
and thence developed extensively in the collaboration process. Perhaps the
significant feature is that before the period of intense development, several
major principles of course design were implicitly if not explicitly recognized
by the co-developers.

Eight volumes, containing a total of fifty-six papers were planned, with a
short study guide which contained directives about the course, sequencing of
readings and learning activities and assignment work of a reflective and
practical nature together with a wall chart to assist students to organise
their study of the material. Although all of the readings were decided on in
the initial period (based in part on draft material already in use at Queens-
land), the Deakin version of the study guide was completed by Stephen Kemmis
with the assistance of the course developer assigned to the team (Garry
Gillard), and sent to Queensland for Leo Bartlett's approval and adaptation.
The latter adapted the study guide for the use of Queensland students, and
this version was produced by his University. Any differences in the guides
finally adopted by each institution were largely organizational and phenotypic
rather than genotypic. Deakin's version was similarly printed in its own
printery. The books of readings were designed by the Production Unit at Deakin.
The contents of the books were printed by the Deakin Printery and the covers
and binding commissioned from an outside printer.

Thus, the two courses (at Deakin and Queensland) had a common core of readings,
both used the wall chart, but study guides were adapted locally for the special
needs of the two institutions (e.g. the Deakin course was a 'short, fat' course
over one semester, while the Queensland course was a 'long, thin' course over
a whole year, so the timing of assignments and readings needed to be varied in
the two study guides).

Copyright

Copyright was sought for all readings and payments made by Deakin University
where charges were required. (It was not and is not current policy at the
University of Queensland to seek permission to reprint copyright material
other than to conform to regulations of the Copyright Act in relation to
reproduction for the purposes of private study.) In 1984 this is still normal
policy at Deakin, not only where there is a possibility of sales, as in the
present case, but also for any course materials which reproduce material
which is copyright. The Deakin policy is currently under consideration, how-
ever, and is likely to change.

Format and Production

Whereas the University of Queensland normally produces external course materials
printed off-set from typescript masters and with a soft cover and stapled
binding, Deakin has a large range of publishing styles, ranging from the large
number of books which have been completely printed and bound outside the
University to a smaller number which resemble those produced in the Queensland
mode. In this case, Deakin took responsibility for the design and production
of the readers, which were produced with glossy perfect-bound covers, although
the contents were reproduced by the University Press, mostly from photocopied
originals. The final materials are of fairly high production quality and are
in a fairly flexible format (readings in volumes can be changed from year to
year with fairly minor disruption). They are regarded highly by academics
who teach in the area (copies were sent to a number both in Australia and
overseas), and it is probable that further external sales of the material could
have been achieved had they been printed in large numbers and widely publicised.
(In 1983, two other institutions used the materials).

Resources

Under the conditions which usually apply for a development of this kind, Deakin
University would have requested the services of Leo Bartlett as a consultant
and paid him for his services at an agreed rate, and his travel, as appropriate.
As this was to be a collaborative venture, the University of Queensland
contributed Leo Bartlett's time and part travel costs in return for sets of
the course materials. Deakin provided the costs of all other overhead: copy-
right payments, course developer (instructional designer' time, designer time,
printing and binding, and mailing. Fifty of the course materials were
despatched to the University of Queensland for the use of its internal and
external students in 1982. It is thought that from 1983 on Queensland will
buy sets at an agreed price. That is, the basis of the understanding is that
the University of Queensland's contribution of Leo Bartlett's time was
notionally equal to the cost of the fifty sets of material. In 1983, Deakin
University Press sold copies of the eight readers for $26.96 per set.

Evaluation and Maintenance

It was decided that the Deakin course developer would also have a role to play
in the evaluation of the course once offered. In 1982 two sets of data were
collected. Students taking the Case Study course on campus at Queensland were
asked to respond to a questionnaire to be read only by the evaluator and not
by the lecturer teaching the course. The results from the questionnaire were
written up as a report by the evaluator and then subsequently included in a
newsletter which was sent to all off campus students at Deakin, with an
invitation to respond to some further questions arising from the responses.

Answers to this second questionnaire formed the material for the evaluator's final report which included recommendations as to such things as a restructuring of assessment procedures.

Revision

The course team communicated by letter with suggestions for changes to the course contents and then met briefly to finalise these details, again at Deakin (during a visit by Leo Bartlett to Deakin for another purpose). The revision of the course materials for 1983 will be carried out by the Deakin course developer and Production Unit. Deakin has budgeted for annual revision for this and all other M.Ed. courses, so the collaborative arrangements now requires only some academic consultation about revision of the reading collection in the materials; no collaboration in production is required since, in budgetary terms, Queensland is effectively a purchaser of the materials.

CONCLUSION

It seems clear, on the basis of this limited study, that collaboration of the kind described in this report is most likely to occur when there is a fundamental agreement between the academics involved about the nature of a field and about pedagogy appropriate to it. Given academic styles of working and expectations about teaching, it seems unlikely that policy makers within particular universities or at the level of state or Commonwealth higher education administration or the bureaucracy of distance education would be successful in compelling effective collaboration. A more appropriate policy would appear to be one of fostering and creating a congenial climate for the growth of general collaborative relationships from which collaboration in particular course developments may follow. The normal ideology of institutions of higher education leads to the adoption of a kind of apprenticeship model, according to which students must be acculturated in a mode specific to the given institution. This ideology works against collaboration in co-development, and in other areas (e.g. credit transfers). The alternative to this might be that a course leading to a degree at one place is seen as being perfectly equivalent to a course of equal weight taken at another.

Does collaboration make for better course offerings? Firstly, with regard to the range of possibilities, there are two possible outcomes. On the one hand, there would and perhaps should be a decrease in the number of courses offered. There is demonstrably no need, for example, for two separate but very similar courses in case study methods in education if arrangements can be made so that the same course may be taken by students at more than one institution. Currently, the number taking the course at both institutions is relatively high. At the University of Queensland it attracted a greater number of students than any other internal and external M.Ed. course unit in 1982 and external unit in 1983. On the other hand, if institutions were to begin to look seriously at the possibilities of cross-crediting, especially in distance education, the range of offerings available to a given student would greatly increase, and, if a national co-ordinating body were to be set up, could theoretically extend to any course offered in Australia. This situation could apply even without co-production.

Secondly, with regard to the quality of the courses, this limited study suggests that inter-institutional collaboration can only improve a course. Any available evidence suggests that the Deakin experience has in general already validated the course team procedure as well as the use of consultants, and collaboration

between institutions simply extends the range and availability of critical
friends and consultants. Evaluation of <u>Case study methods</u> has been carried
out at two institutions. Student feedback suggests that it is a challenging
course; academic opinion is that it conveniently brings together an unique
and useful collocation of material concerned with the field.

Does collaboration <u>cost</u> more? The <u>Case study methods</u> course was relatively
cheap by Deakin standards, as there was no need to employ consultants and
because no typesetting was involved. The cost of travel and purchase of
course materials borne by the University of Queensland would have to be set
against largely hidden costs, like the production, administrative and copy-
right costs, and the large amount of time it would have taken for librarians
to have serviced off campus students making their selection from the fifty-
six readings recommended by the course.

Modes of collaboration range from the most informal co-development of a course
(as with <u>Case study methods</u>) which remains within the prerogative of the
teachers concerned, at one end, to procedures for credit transfer, where a
greater institutional endorsement is required, at the other. It is worth
noting, however, that credit transfer is in effect achieved by the co-develop-
ment model through the device of offering the same course at two institutions.
Clear procedures for credit transfer might avoid the situation which prevails
at the moment in which institutions are not prepared to give full credit for
work done elsewhere because it is not seen as being equivalent to their own
courses. In this way students become the scapegoats for lack of a national
system. Such a system might involve the creation of a national committee like
the one recommended in the draft Johnson Report. Another system would involve
an institution taking 'major' responsibility while receiving 'minor' support
from another one, as already happens in some cases. Whatever the mechanism
may be, the fundamental aim should be to increase the quality and range of
course offerings, and so provide the best possible service for students.

Intensive co-development did not occur in the area of teaching/learning
processes mainly because of a mismatch in the timing of course development
between the two universities. The process at Deakin is more industrialised
and takes longer to gear up. However, some form of course sharing is still
possible. If it goes ahead, it will be because of the commonality of research
(and consequently teaching) interests of the principal course co-developers
involved. Co-development did not proceed in the case of educational adminis-
tration because this intellectual sympathy was lacking. With <u>Case study
methods</u> the mutual interest and understanding between the academics was strong
enough to overcome administrative problems and considerations about timing
and resulted in the development and production of a shared course. Case study
method as a form of social inquiry requires sensitive, intelligent judgement
and democratic procedures. The character of the method is consistent with the
best and most successful principles of course design.

Such co-operation is at present rare. But circumstances alter cases, and if
the congenial climate mentioned above were to be created by the establishment
of co-operative procedures, the possibility of co-development should increase.
Such procedures could be developed not only in the areas of course development
and production, but also in such administrative areas a enrolment, crediting,
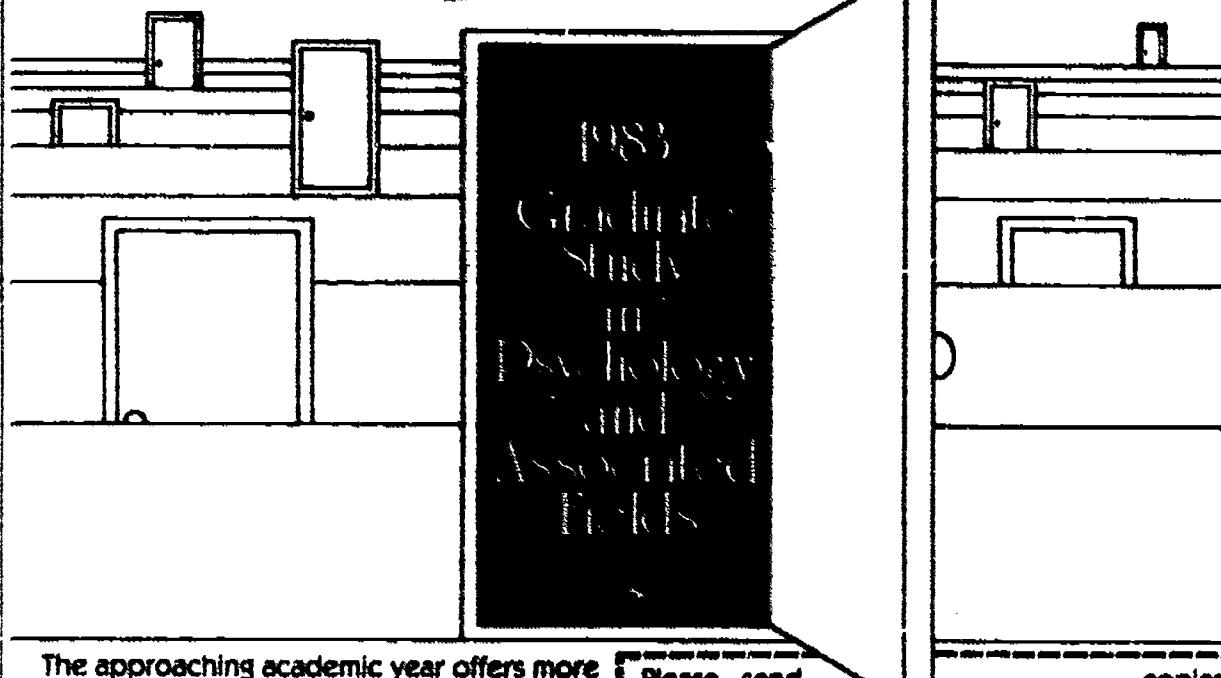and the like.[5]

It is quite common for academics in different institutions to collaborate in
research projects. Often the success of research programs depends upon the
pooling of expertise and resources by institutions. On the other hand, a
pooling of resources and expertise for teaching purposes may be hampered by

funding policies which are based on enrolments at institutions. The dilemma
of collaboration (for excellence in teaching) versus institutional self-
interest can be overcome by collaboration in co-development of courses with
institutions offering co-developed courses in parallel. In this way, the
academics involved achieve explicit recognition for their contributions to
course development (acknowledgement of authorship, etc.) and for their
contributions to teaching (students taking the course in their own institutions).
Arrangements fostering co-development and parallel provision may thus contribute
to a more rational and more cost-effective use of resources in tertiary
education.

NOTES

(1) See, for example: Report of the Inquiry into Management Education. (J.T.
    Ralph, Chairman), AGPS, Canberra, 1982; Commonwealth Tertiary Education
    Commission, External studies in higher education : background paper for the
    Commission's review of external studies, Canberra, 1982; Richard Johnson,
    Evaluative studies program : academic development units in Australian
    universities and colleges of advanced education. CTEC, July 1982.
(2) Louise Moran, & Max Charlesworth, Position paper on distance education,
    Mimeo, Deaking University, 1982.
(3) Sales of parts of courses are a step toward this, and occur already on a
    fairly substantial scale.
(4) The reference is to Section 53(B) procedures as an alternative to
    permissions for reproduction of copyright materials.
(5) The issue of course co-development for on-campus courses has not been
    addressed in this paper which is concerned primarily with distance
    education. One of the authors at least (Bartlett) has used the reading
    and the course design structure with modifications for on-campus teaching.
    It would appear that interactive 'classroom' learning raises many issues
    in relation to the course design and content, than might be described here.

In-Text Questions: A Note on an Experiment in Instructional Design

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ABSTRACT
The use of instructional design is increasingly being discussed in the distance education and higher education literature. This paper reports an experiment in which self study questions are inserted in the text of lecture note material for external students. An evaluation revealed that students who received notes with in-text questions were no different from those who received the standard lecture notes as judged by both performance and attitudinal criteria. Possible reasons for the perverse findings are given and it is concluded that professional instructional design assistance would be of value to subject matter experts.

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Over the past few years, the theory and practice of instructional design has increasingly been discussed in the context of distance education and, more generally, in higher education. A body of literature on the subject has been steadily growing over the decade. The literature is persuasive - it is, for example, argued that instructional design of printed material for external students is not only desirable, but is an essential part of the educational process, and there is considerable research and ad hoc evidence to support this claim.

As a lecturer in a small "external studies" department in a large "internal teaching" university, (one which does not boast any instructional design staff), the author constructed a modest experiment to test one small aspect of design, that is, whether the use of in-text questions improved the educational process as judged by either improved student performance or student satisfaction. In-text questions were chosen for the experiment for three reasons: first, they are easily introduced into text by a "subject expert/amateur educationist", secondly there is no controversy among lecturers concerning their use, and thirdly, questioning is an important part of developing students' critical thinking/problem solving abilities, a topic also of recent interest in the higher education literature.

In 1983, there were sixty students enrolled in the undergraduate external Health Economics 1 course in the School of Health Administration, University of New South Wales. Students were randomly assigned by office staff into a control group of 31 and an experimental group of 29. Students did not know that they were participating in an experiment and the two lecturers did not know which students had been assigned to which group. The experimental design was thus that of a standard double blind randomised control trial.

The control group was given a set of "Lecture Notes". The experimental group was given a set of notes which were identical except for a series of thirteen "self study questions" inserted throughout the prose, as shown in the example below.

> The term price elasticity of demand is used to describe this measure. This important concept is discussed thoroughly in Jacobs pp.71-75. Notice particularly that while the expression "the price elasticity of demand" refers to the effect of a price change in demand, the term "elasticity" is used more generally in many contexts. For example, the "income elasticity of demand" is the percentage change in demand divided by the percentage change in income.
>
> SSQ8 What is meant by:-
>
>   a) The income elasticity of dental services.
>   b) the queuing elasticity of outpatient services.
>
> SSQ9 Why could the price elasticity of demand for medical care be different for the rich and poor. How would you expect the imposition of high prices for medical care services to redistribute services between the rich and poor .

Both sets of notes included a few general questions at the end. The specific aim of the self-study questions was "to stimulate interest in the subject" - they were provocative questions, often with an emphasis on (related) controversial areas of the health care field. No answers were provided.

In May, students were tested on the content with a computer marked assignment
of 24 multiple choice questions. They also submitted a compulsory (but not
assessable) student opinion questionnaire (copy available from author). The
assignment assessment (out of a maximum of 24 marks) is shown below for both
groups:

There is clearly no difference in performance between the groups. A closer
examination showed that the performance of the two groups on individual
questions varied in a random fashion. One question on the test was a direct
repetition of a self study question and consequently it was anticipated that
the experimental group would perform significantly better with respect to this
question. In fact, exactly the same number of students (48%) from both groups
answered the question correctly.

The student opinion questionnaire was designed to elicit responses about all
aspects of the notes (e.g. whether the objectives had been achieved, whether
the wording was clear, etc.). One question explicitly sought opinion about
whether the self study questions stimulated interest in the subject. In both
groups, 58% agreed or strongly agreed with the statement. This is particularly
disappointing, given that the control group was given only a few questions at
the end of the notes. No-one answered "not applicable".

	Control Group	Experimental Group
No. of students	31	29
Mean	12.77	12.07
Standard deviation	2.94	4.31
Range	7-18	3-21

The results, in terms of student performance and opinion, do not support the
contention that in-text questions improve the quality of learning. Yet
there is a wide body of literature which demonstrates that the reverse is true.
How can this be explained? There are at least two possible explanations:

- inadequate design of the in-text questions (too many/not enough, no answers
  provided, etc.), or

- the difference in the instructional design was too small to be able to
  produce benefits.

There is probably some element of both of these factors involved in explaining
the result. Studies reported in the literature were conducted by expert
designers, probably with more time and resources available as well as greater
educational expertise. The present study may well support the general
conclusion of Taylor and White (1983) that instructional design which is
implemented by the subject matter expert with limited resources does not
necessarily achieve beneficial results. If this were proven to be the case,
then subject experts would be well advised to seek expert instructional design
assistance (but mindful, of course, of the resource implications in this
decision). If the second explanation is correct, then the conclusion must be
that small "improvements" in instructional design are not worth the effort

involved as judged by student performance and satisfaction. A third possible
explanation is that the evaluation process used here could not detect changes
which occurred.

The experiment described here has been a modest attempt to improve the
instructional design of printed lecture notes by the addition of in-text
questions. However, although the author is convinced of the value of
instructional design generally, the evaluation of the specific case of in-text
questions reported here, does not support this conclusion. These results
suggest that the amateur instructional designer must take care in designing and
in evaluating any "improvements", and, if resources permit, seek expert design
assistance.

ACKNOWLEDGEMENTS

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Review Articles

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New Directions for Educational Technology

Countering Educational Design. Ted Nunan. London, Croom Helm, 1983. ISBN 0-7099-1812-7 (U.K.) 131 pp. £11.95.

Improving Efficiency in Education and Training. (Aspects of Educational Technology XVI). Edited by A. Trott, H. Strongman and L. Giddins. London, Kogan Page, 1983. ISBN 0-85038-566-0 (U.K.) 237 pp. £15.95.

Selected Readings in Computer-Based Learning. Edited by N. Rushby. London, Kogan Page, 1981. ISBN 0-85038-473-7 (U.K.) 234 pp. £10.95.

World Yearbook of Education 1982/83: Computers and Education. Edited by J. Megarry, D.R.F. Walker, S. Nisbet and E. Hoyle. London, Kogan Page, 1983. ISBN 0-85038-565-2, ISSN 0084-2508. 280 pp. £15.95.

Among the groups of professionals concerned with the general improvement of the processes of teaching and learning are the educational technologists and curriculum developers. It is true to say that these fields have been misunderstood and their work sometimes ignored or worse, rejected. This is especially the case with educational technology. This field is popularly though of as audio-visual aids in education; the 'hardware' view. However, educational technologists have a very much wider conception of their own work than this and it includes a concern for the computer in education among other things. However, I am not sure that all those deeply involved with computers would wish to be known as educational technologists! Why this is so, and what the future holds for educational technology, is a matter for speculation. Meanwhile, the four books reviewed here provide a useful basis for reflection on the current state of educational technology and on computers in education.

Countering Educational Design is different from the other three books in that it takes a critical view of the practices and ideologies embedded in educational technology and curriculum development. The other books are more directly concerned with matters of application, especially with computer applications. Let me say at the outset that I think Countering Educational Design is an important book. One reason is that it goes a long way towards explaining to educational technologists why their work is so often rejected

or ignored by practicing teachers. There are other reasons for its
importance but I shall return to these later. The book sets out to expose
the 'idea control' of professional educational design practiced by educa-
tional technologists and curriculum developers. Throughout the book, Nunan
reiterates that professional designers have two central values which govern
the practice of design. The first value is a belief that knowledge derived
from theoretical and rational sources is inherently superior to knowledge
gained from practice. The second value is an insistence on dividing teaching
and learning into separate design and implementation phases. The problem with
this value is that it prevents, in Nunan's view, access to the totality of
teaching and learning. Examples of the two values at work in educational
technology include the use of analytical approaches to problem-solving, the
systems-approach to design, the use of behavioural objectives, pre-and
post-tests, and control of production facilities.

So how should teachers counter educational design? This question is addressed
in the last three chapters of the book. I should say at the outset that I
think the question is mis-directed. It seems to me that Nunan is more
concerned to counter educational _designers_ and their ideology, not educational
design as such. This observation, I think, is borne out by his suggestions on
how teachers can develop their own practice of·design.

Nunan's approach to the question of countering educational design is double-
barrelled. First he suggests a range of theoretical arguments that teachers
could use against professional designers (a belief in theoretical knowledge?)
and second, he follows this up with suggestions on classroom practice and
ways of developing a personal style of practice-theory dialectic. Personally,
I do not think that this approach will necessarily achieve the desired outcome.
The principle is fine: encourage teachers to become educational designers with
a practice-based and critical approach to educational design. But to achieve
this, the very tools and ideas to be countered are employed. Is this a 'safe'
approach? The risk is that the teachers using the approach may end up with
the same ideologies and practices as the 'professionals' (to which group, in
our meritocratic educational systems, teachers will probably be promoted to
anyway). What then, is the way out of the problem?

As well as speaking to teachers, Nunan might have addressed educational
technologists and curriculum leaders more directly; helped them to become
aware of their ideologies, the impact these have on their clients and suggested
more appropriate innovation strategies. The majority of people involved in
educational technology and curriculum development are people with a positive
orientation to the improvement of their practice. It seems to me that the
valuable ideas and detailed analyses in this book may have been equally well
addressed to these groups, as well as to teachers.

Earlier, I expressed the view that this is an important book and discussed
one reason for that view. There are two other reasons. One is that it
crystallizes for all to see the unintended consequences of the strategies,
practices, and beliefs of a specific professional group and how these beliefs
and behaviours can lead to professional ineffectiveness. Thus it is an
interesting case study of the general principles of decreased professional
effectiveness put forward by Argyris and Schon (1975), a source that Nunan,
surprisingly, did not draw on.

The remaining reason why this book is important is that it is a most timely
warning to those hopeful that the computer will usher in a new educational
age that great care and consideration must be given to the very complex
social, political, and professional issues involved in educational innovations.

This comment in no sense implies that computer technologists are blindly
rushing into educational problems with 'solutions looking for problems'.
On the contrary, both Selected Readings in Computer Based Learning and the
World Yearbook of Education 1982/83, Computers and Education, present sensibly
balanced views of developments in computers in education and both give
careful consideration to the major issues they raise.

These two books, both edited collections of papers and articles, take us into
the bewildering world of the computer acronym: CEDAR, CBL, CML, CAL, CAI,
COMAL (not, of course, to be confused with CAMOL), CICERO and PLATO, to name
but a few. Both books are recent overviews of the computer in education, and
both have a predominantly British orientation with relatively fewer articles
from Europe, North America, and elsewhere. Between them, these books present
45 articles. Clearly, it is impossible to review all 45 articles here.
However, I do think it will be helpful to indicate the extent of coverage by
describing the major section headings so that potential readers will be aware
of the very diverse range of matters discussed.
World Yearbook is divided into six parts: Issues and problems, Computers in
action, National case studies (of France, U.K., South Africa, Quebec and
New Zealand), Computers in the curriculum, Bibliography and biography, and
Glossary. The three major divisions in Selected Readings are less descriptive
of their content: Survey, Milieu, Applications. Considered together these
two volumes address themselves to the following major matters. First, they
pick up some of the most important issues and problems in introducing
computers into education. The first five articles in World Yearbook deal
with issues very well indeed and other papers, most notably 6 and 7 (Towards
a pupil centred classroom, and The microcomputer and teacher's needs) address
these in quite practical ways. Issues papers are more widely scattered in
Selected Readings; the relevant papers being 1, 5 and 10.

Second, both volumes provide valuable surveys of activity in using the computer
in education. These surveys range in breadth and scope from national surveys
and consideration of computers at particular levels of education (such as
universities and schools) to analyses of computer applications in specific
disciplines such as in geography and mathematics. Selected Readings is the
more comprehensive in its coverage of discipline-oriented applications of
computers.

With such a wealth and diversity of material let me record my appreciation to
the editors for their policy of providing very helpful abstracts with each
article. These greatly assist the reader to discern what might be appropriate
for different interests. It is also possible, during a brief time, to gain
an overview of the field of computers in education by simply reading through
all the abstracts at one sitting. My appreciation of abstracts also extends
to the editor of Improving Efficiency, a volume I will return to later.

Rather than deal with the tantalizing applications of computers I wish to
reflect on one of the main issues raised by the introduction of computers in
education.

This issue concerns the attitude, often fostered by educational technologists,
that teaching and learning will generally be rendered more effective by the
simple adoption of new technologies. The educational effectiveness of
computers (or other technologically based instructional systems) has not been
shown to be necessarily superior when compared to traditional approaches.
True, the methodologies used in the past to establish effectiveness have been
shown to be suspect, a matter considered in World Yearbook, paper 3, by
David Walker. Of course, what can be easily forgotten in this debate is that

there are special situations in education - both in teaching and its admin-
istration - that can be rendered more effective by the computer, and moreover,
that there are a whole range of novel opportunities (including curriculum
opportunities) made possible by the introduction of computers. Howe and
du Boulay in Selected Readings point out examples of special situations
including complex simulations, teaching students with learning difficulties,
and providing remediation. Part 4 of World Yearbook points to examples of the
ways in which computer technology reaches over the process of education to
influence curriculum content. Nevertheless, I have strong suspicion that
much of educational technology, including computer technology is, as Hoyle in
World Yearbook argues, 'a solution in search of problems'. It is important
therefore, for educational technologists to identify the real, rather than
the imagined needs of education. And this requires something more than systems
analysis. If needs can be accurately identified and constructively responded
to then an important advance will be made in keeping technology 'in-step'.
The fact that educational technology is (and so often has been) 'out-of-step'
is one of its major problems according to Austwick (in Improving Efficiency).
It seems to me that part of the reason for this situation is due to the
use of simplistic scientific models, a problem that Nunan has thoroughly
discussed in Countering Educational Design. It follows that we may have
probably grossly underestimated the complexity of the institutional settings
we work in, the people we work with, and the customs and traditions of
different groups of people in different disciplines. It also seems to me that
there are weak theoretical and practice-based models of innovation in
educational settings. Nunan has shown in detail how some of our theories have
probably been quite inappropriate and possibly harmful.

The problems of educational technology are also addressed in Improving
Efficiency especially in the first and last chapters. These look at the
changing nature of educational technology and at related controversies about
research methodologies. Improving Efficiency in Education and Training
presents the edited papers of the Sixteenth Annual Conference of the Associ-
ation of Educational and Training Technology held at Bulmershe College,
Reading, in 1982. The purpose of that conference, we are told, was to present
strategies for increasing effectiveness and efficiency in education and
training. Sub-themes dealt with microteaching and the links between education
and industry.

I have several concerns about publishing conference proceedings which I've
expressed elsewhere. (Cannon, 1983). One of these concerns relates to the
present volume. That concern is whether the editorial effort is worthwwhile.
This is a difficult question to answer because it begs the question:
worthwhile to whom? I suppose for conference participants, a volume of papers
presents a worthwhile record of their conference experience, the totality of
which, however, cannot be fully reproduced in print. For other readers the
collection may be less worthwhile, not because of quality but because of
problems of coherence and timeliness. Conference volumes inevitably cover a
wide range of topics, and this volume is no exception. Coherence suffers
because of this. We know that the major theme of the conference was improving
efficiency, yet only one paper contains direct reference to this concept in its
title. To be sure, the concept of educational technology embraces the notion
of efficiency in education, but I must confess to becoming impatient with
conferences that purport to address a theme when contributions do not directly
reflect that theme. Why bother to have conference themes at all? In the
present case, neither the opening nor the closing overviews attempt to draw
together ideas which reflect the theme I find this a great pity. So, if I
want to learn more about improving efficiency I will have to wait for some
advance on Piper's excellent collection of papers (Piper, 1978). However,

Improving Efficiency does very well on the matter of timeliness.   The editors
and publishers have done a commendable job in getting these conference papers
published so rapidly.

The 29 papers presented in this volume have a strong emphasis on computers
(nine papers) microteaching (seven papers) and school-industry links (five
papers).   One characteristic that is particularly pleasing among the contri-
butors is the integration of educational technologies: for example, video
and computers, and microteaching and computers.   However, parts of this
volume illustrate what I find to be a regrettable trend in educational
technology: that is a trend towards undue specialization.   To put it another
way, it is a trend toward systematic in-depth treatment of problems at the
expense of synthesis and integration of ideas.   There is nothing inherently
wrong with breadth as opposed to depth in intellectual activity.   Indeed one
of the strengths of educational technology is (was?) its broad view, and its
eclectic and integrative approach to educational problem-solving.   It will be
a pity, and a loss, if this field of enquiry and development moves towards
such specialization of function and language that its members are no longer
able to communicate with each other, and worse, that they are unable to
communicate with the clients they are supposed to be helping.   It is possible
that this situation will become most pronounced in the area of computers in
education, if it has not happened already!

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A Practitioner's Impressions of a Sample of the Literature on Current Issues in Higher Education

The Pursuit of Excellence in University Teaching in Australia. J.M. Genn, Kensington, Australia, Higher Education Research and Development Society of Australasia, 1982, ISBN 909528-70-5, viii and 273 pp, AUS$30.00.

Accountability or Freedom for Teachers? Vol. 7 of Leverhulme Programme of Study into the Future of Higher Education. Edited by D. Bligh, Guildford, England, Society for Research into Higher Education, 1982, ISBN 0-900868-88-0, 137 pp, £6.90.

Faculty, Students and Managers. K.R. Dutton, Armidale, Australia, Institute for Higher Education, University of New England, 1981, ISBN 0-85834-402-5, x and 44 pp, AUS$3-00.

Managing Staff for Excellence — New Practices for the 1980s. W.A. Pullman, Armidale, Australia, Institute for Higher Education, University of New England, 1981, ISBN 0-85834-404-1, xiii and 80 pp, AUS$6-00.

Genn's book reports the results of a survey of academics in 10 disciplines and 6 universities in Australia (using forced response questions only) in 1973. The survey dealt mainly with the perceived goals of university education, the criteria which the academics would like to see used for promotion and those they believe are actually used, attitudes toward undergraduate teaching, the practice of various undergraduate teaching methods and the perceived constraints on them, and commitment to postgraduate teaching, research and administration. He demonstrates that the results are statistically consistent with a model that links discipline and status with attitudes towards undergraduate students and teaching, and with the person's preferences in work and methods. Finally, he relates the outcomes of his survey to the opinions that others have expressed about the pursuit of excellence in teaching and rewards for achievement in teaching.

The volume in the SRHE Leverhulme Series, edited by Bligh, contains four chapters. In the first, by Lindop, Merritt, Gowenlock and Piper, the British university and polytechnic system is described in terms of some major characteristics of the teachers, the institutions and the overall administration. The chapter concludes with a series of propositions for the future. Bligh's own first chapter deals with professional development for teaching and covers the rationale for staff development, the form it could take, the need for institutional commitment, the dangers of inappropriate policies and practices, and the need for a rational initiative in staff development. Warnock discusses alternatives for each of:- the existing, British binary system (universities and polytechnics), which is not the same as the Australian system in some respects; social accountability, practical relevance, specialisation and scholarship in the design of curricula; and the balance between accountability and academic freedom. In his second chapter, Bligh explores this last theme in more detail, particularly in terms of the future relation between the student and the courses offered by institutions, and the 'slippery slope of accountability' for teachers.

In his short volume for IHE, Dutton concentrates on the hypothesis that

'diversity' is a more significant characteristic than 'community' in a modern
university. He illustrates the diversity which exists in the three main
groups of university personnel - academics, students and administrators - and
how the diversity affects the relations between people. He illustrates what
he sees as the major sources of tension in the universities in the coming
years of financial restraint.

Pullman, in the other IHE volume, describes a number of steps taken by a
particular institution (WAIT) to respond to the current problems of
institutional management. For each problem, in the areas of staff allocation,
promotion and morale, and staff development, he gives a precise and frank
account of the rationale, the procedures used and the consequences.

These books seem to be relevant to other readers beside fellow experts or
leaders of higher education. Readers who may turn to the higher education
literature for guidance include newcomers to academe (not always at the
junior levels), experienced, middle-rank academics wishing to react positively
to the restrains which they are beginning to experience, and more senior
academics and administrators finding themselves confronted with major problems
of policy, planning and staff management, and recognising that their past
experience has not provided them with the necessary insight and skills to cope.
Probably only a minority of each sort will refer to these books, but surely
that minority is worth encouraging? The overall credibility of the experts in
higher education rests to some extent on the value perceived in their writings
by the people who must make higher education function effectively on each and
every working day. 'What has each of these volumes to offer each of these
sorts of reader in turn?' is the basis of the remainder of this review.

First, newcomers to the literature on higher education should be warned. The
authors of these books, like other experts of higher education, demonstrate
their expertise by not making definitive statements. They deliberately create
the impression that some practice or outcome of higher education seems
commendable when viewed from one perspective but appears contrary to a valid
purpose when viewed from a different perspective. They are purposefully
reluctant to give precise directions as to what should be done and how,
because they realise that at this most critical time it is imperative that
each of us develops a substantial personal understanding of higher education
and real expertise in its skills.

The newcomer to academic work should start with Dutton's book. He gives
thumbnail sketches of people who should seem familiar. He goes on to describe
how some typical points of view are defensible to some but abhorrent to others
in the community of scholars. He selects an unusual example of change that is
occurring in universities, viz. the specialisation of an academic's expertise,
and shows how this leads to breakdowns in the community of scholars. Problems
arise through loss of commitment to the local university community in favour
of the (small) international community of like specialists, and through
fragmentation of undergraduate courses. He continues with a most readable
blend of anecdotes and general observations. The whole book is based on the
theme that diversity is a more significant characteristic than community in a
university, and that this leads to a variety of tensions between students,
academics and administrators. Each reader may well recognise some personal
characteristic or ambition that could increase one of those tensions. Dutton
leaves it to each of us to work out our own personal response.

Bligh's contributions to the Leverhulme Series volume which he edited are the
next for the newcomer to read. Chapter 4, in which he discusses fully the
meanings and misconceptions of academic freedom, is an excellent example of

how rigour can be achieved at the same time as readability and relevance for
the practitioner. Only the most cynical academic could resist the challenge
to think about where he or she operates on the 'slippery slope of accounta-
bility' as it is presented by Bligh. The newcomer may also be stimulated to
think about two aspects of an immediate personal problem when reading Chapter
2 on staff development. The first part of the chapter provides clues to what
one needs to do to become a professional academic (at least in terms of
teaching) and why that is unlikely to be achieved by attending lectures and
tutorials in 'Introductory Higher Education' and 'Advanced Higher Education'.
The second part of that chapter, particularly when related to the first few
pages, is likely to stimulate thoughts about why one's institution appears to
have no policy or procedures for dealing with a substantial, self-evident,
general problem, which is becoming more acute. That is, the largest group of
staff who could benefit from an appropriate form of development is the
experienced, established staff for whom opportunities are diminishing and
frustrations are increasing.

The remaining chapters and the other two books are less relevant and less
readable for the newcomer.

Good reivsion is provided for the experienced academics in Dutton's book and
Chapter 4 of Bligh's book. They identify critical problems, within familiar
issues, which still require thoughtful resolution. If one's concern is for
conditions of service, career prospects and other union-like aspects then the
first chapter in Bligh's book and Pullman's book are essential reading.
Although the first refers to the British system there are enough similarities
between it and the Australian system to make the arguments and many of the
propositions at the end relevant to Australians. The essence of the chapter
is that in the present politico-economic climate the higher education sector
will have to make some substantial adjustments. By comparison with academics
in other countries and with other professional groups it seems British and
Australian academics are in an enviable position still. However, to retain
the more valued features of academic work in the future, the authors argue
that some compromise or change is necessary soon. The sorts of change they
suggest are the establishment of formal procedures for achieving mobility of
staff among higher education institutions and to and from industry and
commerce, and a number of modifications to tenure. The propositions will not
be popular, but one can visualise some worse solutions that could be imposed.

Bligh's first chapter on staff development is particularly helpful for the
experienced academic because it suggests, first, a number of actions the
individual can take on his or her own behalf, given a few resources in the
institution. Similarly, it suggests how the experienced and successful may
help the less-experienced or less successful with little sacrifice. But most
significantly, the chapter ought to stimulate middle-rank academics to press
for policies, planning and resources at the institution level with the purpose
of maintaining job satisfaction and morale.

If you are attracted by the thought of finding out how close your attitudes,
priorities and teaching practice are to those of your Australian colleagues in
a number of disciplines and universities, then answer the questionnaire at the
end of Genn's book and compare your answers with those of 800 other academics!
Of course, you are different, but is it because you are a woman, or a tutor,
or from a professionally-oriented discipline, or is it because you have been
influenced by the ethos of your institution? Genn helps you to disciver the
reason, but if you want to do something constructive about either your own
characteristics or those of your institution you will have to look elsewhere.

Each of these books has something that may stimulate the person assuming
responsibility for policy, planning and administration. In completely differ-
ent ways Dutton and Genn demonstrate one of the most important requirements of
policies and procedures in higher education, viz. they must accommodate the
justifiable variations in the response of different individuals to the
challenges and opportunities of academe. Warnock argues the same principle
for institutions, particularly in terms of the balance between research and
teaching, the var'   urriculum options, and accountability and freedom (in
Bligh's book). Cha   4 of the same book provides the most thorough justific-
ation for encouraging free response, subject only to the requirements to
explain to others and to listen to informed comment. Pullman gives an account
of how one institution 'AIT) has tried to develop policies and procedures
within the triangle of individual freedom (for staff and students),
institutional goals and imposed constraints. He describes the rationale for
policies in terms of promoting quality, encouraging innovation, and maintaining
morale in the steady state. He goes on to describe the specific procedures
for implementing the policies. and the reactions they stimulated. He also
includes an account of how some of the policies could not, or did not, achieve
the required result in a reasonable time. Three worthwhile principles seem to
underly this account. First, in a period of non-expansion, the 'managers'
must be constructive and innovative in order to avoid a steady decline into
mediocrity. Second, all those affected by the policies and procedures must be
sufficiently involved during the planning stages that most are willing and
able to help in the achievement of the objectives rather than in their
obstruction. Third, a part of any policy should be a statement to review its
achieveme.ts after a specified period. The conclusion is that this is the
time for crategic management rather centralised management, crisis management
or management by exception.

For those who aim to encourage individual colleagues to give of their best and
obtain satisfaction even when the road for progression is blocked, Bligh's
second chapter is essential reading. Heads of department and deans may not be
the people primarily responsible for staff development. However, after read-
ing that chapter, it should be clear that they have a major supportive role
for individual staff members and for the staff development experts in their
institution, and a role as a pressure group for the establishment of an
institutional policy for staff development. Heads of department presumably
know that any substantial failure on the part of colleagues to achieve
excellence in teaching and scholarship, and to obtain personal satisfaction,
will seriously diminish their own achievement and satisfaction.

All four books tackle the problem of criteria and procedures for promotion,
and in particular, the significance of teaching in that context. Dutton
deals with it only briefly; Bligh deals with it in the context of staff
development; he and Pullman describe how teaching has been evaluated i.
order to be used as a major criterion in promotion in specific instituti.p:.
Genn deals with the issues most comprehensively but, unfortunately, he gives
the impression that he is backing all of the horses in the race. His survey
shows a strong polarisation between what academics view as the ideal and what
they view as the reality of the importance of teaching in determining
progression. He agrees evaluation of teaching 'is a good idea in principle'
and he notes attempts to introduce informed evaluation, but he also notes
that the 'difficulties are legion' and, indeed, he deals with some of these
at length. Overall, Genn conveyed the impression to this reader that he
thinks the potentially bad consequences outweigh the good consequences.
Whether that was his intention is not clear. Surely, though, the risks in
evaluating teaching are not substantially greater than those for other
professional activities when the evaluation is made by knowledgeable,

experienced, successful practitioners of the particular activity. This last qualification is the critical one for the evaluation of teaching in higher education and it rarely seems to be satisfied.

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Reviews

Lucky Jim. Kingsley Amis, first published 1954 by Gollancz, a Penguin title since 1961.

You could build a tragedy, or at least a compelling drama, out of the plot's elements. Recall them: a young lecturer in history, with a gift for putting his foot in it, fears that his probationary employment will not be renewed. His head of department is incompetent, but uses him as an intellectual errand-boy, while the professor's wife threatens the lecturer with dismissal because of incidents arising in his private life. He has lost the taste for his work, partly because of the demeaning situation in which he is placed, partly because he despises the university system. He is emotionally involved, almost despite himself, with a neurotic woman lecturer. His chances of tenure seem to depend on placing his only article in a scholarly journal; the editor of the one he has chosen turns out to be a plagiarist who palms off the article as his own in an Italian journal and goes to a chair in Argentina. The lecturer is poor, relatively friendless, and beginning to act strangely. How will all this be resolved - in murder, breakdown or suicide?

Kingsley Amis turned it all into high comedy. Lucky Jim is the funniest university novel, and one of the funniest yarns I have ever read. Its success is due in part to Amis's wonderful gift for hyperbole, which is displayed on almost every page. It is due also to his creation of Jim Dixon, lucky only at the very end of the book, who was one of the first of the modern anti-heroes. His genius for making awful mistakes, and then making them worse in his attempt to cover up (as in the affair of the burned sheets), makes the reader almost writhe in anxiety. Add to that his tendency to allow his real feelings to gain some expression by making faces: the crazy peasant face, the martian invader face, the eskimo, the mandrill, the lemon-sucking, the Sex Life in Ancient Rome face. Some of these scenes have you burst out laughing, a startling thing for others if you're reading the book in a train or bus.

I first read Lucky Jim as a graduate student, probably in 1959, when it had been out five years. It was all too easy to identify with Jim, especially as I too was at a provincial university, though in Australia, not England, had no money, and was aiming to be a lecturer in history. His characters were all recognisable or at least credible, as they should have been, since Amis himself was an academic. I was too young to have passed through university with ex-soldiers like the formidable Michie, but I knew people senior to me who had done so. All in all, Amis's account of university life was instantly persuasive.

The only mildly jarring note to me was Dixon's dislike for his subject. I
could understand it, since I had disliked virtually all subjects at school, and
had been bored again as an undergraduate. But once I began to do research in
modern Australian history as a graduate student I became gripped by my subject,
and have been that way for the last 25 years. Why was Jim Dixon there at all,
if he got so little out of his work? It's a question that Jim has passing
stabs at answering, but without real success. Probably, it seemed a good idea
at the time, and it was better, or thought to be better, than schoolteaching
(actually, I thought the same, rightly or wrongly).

Re-reading the novel carried me back to the university of the 1950s, where job
opportunities were very few (though they had become plentiful by the time I had
my PhD), professors were God, getting that first article published _was_ a major
goal, and you had little money to indulge in good eating, drinking, smoking or
- my own besetting weakness - long-playing gramophone records. I was a bit too
junior to know any professors well, but none of those I encountered were as bad
as the odious Ned Welch. But how could anyone be? He is the archetypal absent-
minded professor (and he loves his title) who gets people's names wrong, drives
his car like a tank, is grubby ('There was a small golden emblem on his tie
resembling some heraldic device or other, but proving on closer inspection to
be congealed egg-yolk'), tedious, devious, pretentious and footling. And he
has power, apparently almost absolute power, over Dixon's future, which is the
engine of the plot.

The wheel has turned, and turned again. For nearly twenty years that plot
would not have worked well in either Jim's country or mine, because of
university expansion. Jim would simply have snapped his fingers at Welch and
gone somewhere else. Now it has become relevant again as jobs have become
scarce. What's more, universities now use probation and short-term positions
in a whole-hearted way, whereas in the fat years tenure was in practice
immediate and automatic. Yet some things have changed, apparently for good.
The god-professor, for example, has lost a lot of his divinity. Administrative
democracy has hit the universities, and Jim's fate would now be decided not by
Welch but by a series of committees, with the right of appeal if the decisions
went against him. Welch could no longer get away with his devious manipulation,
though Jim's urge to stay on the right side of his head of department is a
universal sentiment.

Amis's nastiest portrait is not Welch, who is to be laughed at, but the unlovely
Margaret Peel, who is to be feared. Female academics had an unenviable lot in
those days. They were a statistical curiosity, and some of them certainly
seemed to see the university as a refuge. Today there are many more women in
academic jobs - though proportionately the increase has not been dramatic -
and lots demonstrate, as easily as their male colleagues, a capacity to lead
full lives as academics and as spouses and parents. Jim's emotional problems
today would be more likely to come from a relationship with a female student,
probably of 'mature age'.

Otherwise the book could be written just as effectively today as in the early
1950s. It would have a slightly different flavour, of course, since in the
early 1950s horizons were narrower, the whole society was poorer, the sexual
revolution had not occurred, grass was still being mowed rather than smoked,
television was a scientific plaything, and so on. But universities change
less than societies. One of Welch's colleagues was 'the only prof. in the
place who's resisting all this outside pressure to chuck Firsts around like
teaching diplomas and push every bugger who can write his name through the
Pass courses.' The 'outside pressure' might puzzle some, but pressures of
that nature exist, and the resistance continues. Student drunkenness continues

to be a problem – but then it was in the 13th century, too. And 'the social
role of the University' which, according to Jim, didn't mean very much just
after the war probably still doesn't mean very much. Universities are refuges,
and do have their share of oddballs and freaks (in my day we collectively
described the whole English department in these terms, but that was just the
healthy exuberance of historians). I'd be delighted to see a latter-day comic
master pick up his pen and aim it at the university, but those who have written
on that subject have had more serious intent – and that includes Malcolm
Bradbury.

In any case, I'd bet that Lucky Jim would still win the belly-laugh stakes.
Even at the fifth or sixth reading, it is a comic masterpiece.

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**The Management of Peer-Group Learning. Syndicate Methods in Higher
Education.** Gerald Collier, Guildford, Surrey, The Society for Research into
Higher Education, 1983, ISBN 0-900868-96-1, 129 pages, £9.75.

This is a small and very readable book, about syndicate methods of learning in
tertiary education.

To start Collier provides a clear definition of his perception of Syndicate-
based methods. He views syndicates as resulting from a larger class being
divided into small groups of 4-8 students who are given assignments to be
completed on a co-operative basis. The small group syndicates act as teams
'for much of the time in the absence of a teacher' (p.3). The syndicate
approach may be used for the whole or part of a course.

The distinctive features are:

● a central role for 'intensive debate' (p.4) through small group work
● assignments are designed to use student first hand experience and
  secondary sources
● plenary sessions process and summarize, at appropriate stages, the small
  group work.

A worthwhile discussion of aims and assumptions in higher education emphasises
the rationale for syndicate work. Collier efficiently encapsulate the
significant recent ideas on the purpose of higher education. In this process
he cites the Hale Committee, refers to Rudduck (1978), Abercrombie (1978), the
meaning of the Keller Plan (1968) and Goldschmid's peer tutoring (1976), and
effectively summarizes from these a list of seven cognitive qualities which
are needed by students to achieve the purposes of higher learning. He adds
three more points to this list with a most perceptive and yet brief discussion
of the Club of Rome Report (Botkin et al. 1979 No Limits to Learning) and
Edgar Schein's 1972 Professional Education. The latter notes the need for a

multi-disciplinary approach to content and the former stresses the urgent need
for academics to be open to 'innovative learning' (p.7) as an appropriate
response to the rapid change in modern technological societies. There follows
logically a deep concern about categories of students who assume that 'you
don't read the text until the lecturer has told you what to see in it' (p.29).

Syndicate methods contrast significantly with the traditional teacher-directed
lecture techniques and are expected to create a learning environment which
more effectively promotes seven of his ten aims for higher learning.

The remainder of the book consists of experience-based case studies which
identify diverse ways of promoting learning in syndicates and the problems
which arise. The editor claims that there are two main distinctive outcomes
from these cases. They are (1) heightened motivation of students and increased
involvement in academic work (evidence described on p.16). Huczynski (1983)
develops this point in his Encyclopedia. (2) development of higher order
intellectual skills (evidence on p.11). He also notes that syllabus coverage
tends to be less but there is some evidence to the contrary, i.e., collabora-
tion in small groups improves knowledge (see pages 10 and 11).

I would be surprised if another outcome was not achieved at least to some
degree. This is an improvement in student capabilities in co-operative or
collaborative learning achieved by the intensive debate within the syndicates,
a negotiation of ideas which does not prevent a student from maintaining a
hold on his or her own opinions.

The significance of introducing in Australia collaborative as opposed to
competitive learning as a worthwhile and viable option was referred to by Lee
Owens (1983 AAAE), and Robert Connell et al. (1982) has pointed to the strong
class biases in the competitive model of learning in the Australian schools
which are feeders for higher learning institutions. Clearly, co-operative
learning needs, supportive techniques and syndicates abound in possibilities.

The case studies include contributions from a biologist - small group expert;
business stud. - group dynamics expert; a peer group learning specialist -
college administrator; linguist - small group learning professional; medicos,
engineers, zoologist, physicist, geographer and sociologist.

Appropriately the closing chapters contain useful guidelines for practitioners
and ideas for further research.

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Encyclopedia of Management Development Methods. Andrzej Huczynski,
Aldershot, England, Gower, 1983, ISBN 0-566-02334-2, 339 pages, A$40.00.

It is a pity that the title may limit the audience for this book as it has
undoubted value for all trainers, teachers, tutors and program designers
rather than only those in the management field.

It may not turn up readily in a computer search and it is too useful to be
missed accidentally. There is no curious person who has picked it up from my
desk and perused it who has not commented with interest and favour.

A colleague counted the Huczynski teaching and learning methods referenced and
they total 302; some achievement! A random sample gives you: Autonomy Lab
(Creative Laboratory, Peer Learning Community, Learning Community), p.45;
Directed Private Study, p.97; Experience-based Learning, p.108; Peer Teaching,
p.205; Psychodrama, p.229; Socratic Questioning, p.267; Talk, p.285; Tutorial-
Tape Document Learning Package Approach, p.307; Worksheet, p.315.

The encyclopaedia is prefaced by the author's identification of his Criteria
for the Selection of the Methods included and I was impressed by his grid (Fig.
2.4, p.11) with one axis Areas of Learning based on an improvement to the
Bloom taxonomy (1966) the other on levels of learning.
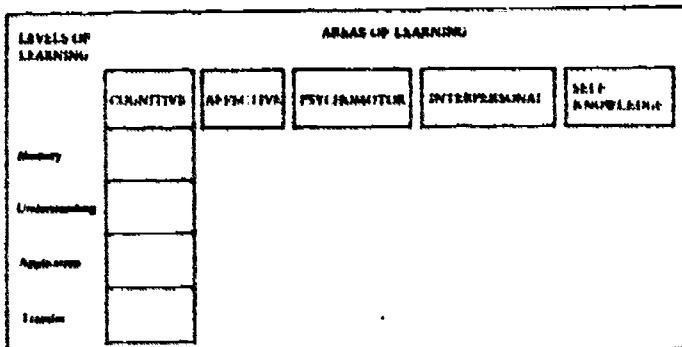
Figure 2.4   Domains and levels of cognitive learning

The criteria of Group Size and Degree of Student Autonomy (p.3) as a basis for
choice did something to mollify my first reaction which was to note the need
to view learning from an adult learning perspective as well as from a more
traditional teacher-centred approach. This is, in fact, covered in the diverse
methods included in the book.

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Access to Privilege: Patterns of Participation in Australian Post-Secondary Education. D.S. Anderson and A.E. Vervoorn. Canberra, Australian National University Press. 1983. ISBN 0-7081-1025-8. 197 pages. A$15.50.

Is Higher Education Fair? D.W. Piper (Editor). Guildford, Surrey, The Society for Research in Higher Education, 1981. ISBN 0-900808-82-1. 194 pages. £9./5.

Higher education has been and still is dominated by the privileged. Whether this is because the privileged in society, having benefited from higher education themselves, strive to maintain that privilege for their offspring; whether higher education, being a product of the privileged classes, and so reflecting their values, is incompatible with the values of other groups in the community; whether the cause is some combination of these two, or something totally different; the fact remains that there are substantial biases in higher education attendance patterns - particularly with respect to class, race, sex, age and geography. And perhaps we, that is, society, should do something about it.

The above is the essence of these two books. They provide detailed evidence of the nature and extent of biases in participation in higher education. They raise, but do not resolve the question of cause. And they provide some guidelines about whether and how society should attempt to remove the biases.

Access to Privilege provides an historical review of research on higher education participation (with a chapter on TAFE which justifies the use of 'post secondary' in the title), examined for age, sex, school background, geography, ethnic background, aborigines, and social class. As well as the chapter on TAFE (probably the first review of research on the social background of TAFE students), there is a chapter providing data on the overall number in post-secondary education in Australia, and a chapter on part-time, external and post-degree students.

There is sufficient data quoted to satisfy even the most ardent numerophile, but there are also sufficient within-text summaries to allow other readers to skip the figures yet still catch the sense.

Is Higher Education Fair?, an edited volume with the usual advantages and disadvantages of variations of style and approach, is very similar in content. Like Access to Privilege, it has chapters on bias related to sex, geography, race and class - and adds disability, religion and language. One or two of the chapters present tables of data, but generally questions are pursued at a more general level, reviewing findings rather than presenting data.

While it is easy to find small differences between the findings reported in both books, they present a similar picture. Despite many differences - higher education systems, political histories, dramatic yet quite different social changes (to name just a few) - the composition of higher education in both countries shows remarkable constancy and nearly identical biases. Universities, to overstate the data, are biased towards those who are male, young, Anglo-Saxon, live in metropolitan areas, have attended better schools, and whose parents are not manual workers.

The question of cause is considered in a number of forms. Anderson and Vervoorn present a model based on factors that influence the individual (rather

like a path model). Williamson, in Piper's collection, presents a model
based on the interactions of societal processes. While neither model is
fully exploited, they serve together with other explorations of cause in both
books, to highlight the complexity of the question. If this seems rather
trite, we should recall that the Labor Government of 1972 abolished fees with
the expectation that that single act would open up access to higher education.
We might also recall that many of our collegues in higher education have used
the argument that, because a public examination is used as a selector, all
groups in the community have an equal chance of entry. Hopefully, the treatment
of causes of bias in higher education participation in both books, incomplete
though it may be, will spare us from such simplistic, single factor
conceptualisations in the future.

Should, and if so how should, tertiary institutions attempt to remove these
biases? Piper summarizes these issues in the middle part of his excellent
introduction. In Anderson and Vervoorn there is no single summary. The
issues arise in various places - in Chapters 1 and 12, and in the Chapters on
aborigines, ethnic minorities, and social class. These are, for me, the most
thought provoking (and underdeveloped) segments of both books. Education,
Piper tells us, 'necessarily subverts, weakens and eventually destroys one
culture in order to replace it with another' (p. xiv). We can change higher
education to make it easier for disadvantaged groups to enter, but is that at
the price of their adopting male, Anglo-Saxon, middle class values? Or is it
possible to open access and only subvert one of the values of the
disadvantaged groups - that of not valuing the higher education that we offer?
(An important theme in Seymour's play The one day of the year - and for Hughie
it was not possible!) On the other hand, will the privileged allow access to
be widened, or, as Anderson and Vervoorn suggest, will 'those already well up
in the hierarchy redouble their efforts to retain their children's advantage'
(p. 171)? Neither of the books provide an adequate analysis of these questions.
Yet they say enough to indicate the complexities involved, and to lay the
groundwork for an urgently needed more complete analysis.

It is impossible not to be struck by the coincidence of the appearance of
these two books at a time when such different political climates exist in the
respective countries. These differences influence particularly the tone of
the arguments - the one strident and challenging, the other supportive and
hopeful. Just one example will illustrate this. Piper askes questions like
'Will the cuts disproportionately affect those categories of people already
under-represented in higher education'" (p. xvi), and goes on to other
rhetorical questions about ethics, fairness, the type of society we want, and
so on. Anderson and Vervoorn after noting that 'while capacity remains
restricted ... those well up on the social ladder will continue to win' (p.
175), feel able to suggest expansion as part of a thrust of broadening access.

Both books are particularly relevant to Australian post-secondary education,
and, given the recent noises being made by the Government and the C.T.E.C.,
they provide most timely inputs. They should be compulsory reading for
administrators in post-secondary education in Australia.

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How to Develop Self-Instructional Teaching. A Self-Instructional Guide to the Writing of Self-Instructional Materials. Edited by D. Rowntree and B. Connors. Milton Keynes: The Centre for International Co-Operation and Services, The Open University, 1979. 333 pp. plus source materials.

This excellent book, produced by staff of the Institute of Educational Technology at the Open University in Britain, is intended for all teachers who wish to write self instructional material for their students. It is not a conventional book - there is no literature review, no bibliography, virtually no theoretical discussion and definitely no educational jargon. The authors describe the book as a "course" which provides "practical guidance" and "guided practice" in developing any kind of self-instruction. The course aim is "to help you to teach better than you otherwise would have done - especially via self-instructional materials". More specifically, this means articulating aims, identifying prerequisites, selecting subject-matter and media, structuring lessons, designing assessment and developmental testing.

Chapter 2 is "An Introduction to Self Instruction". Of the seventy-two pages, only the first four are devoted to the questions of "why use self instruction" and "what is self instruction". The bulk of the chapter (sixty five pages) is taken up by a challenging set of progressively more advanced exercises in which the reader evaluates a passage of self instructional material. The authors follow this up with an annotated version of the original passage, showing its defects. The reader is invited to re-write the passage to eliminate the defects and the re-written version may then be compared with the authors' rewritten version. Finally, it is recommended that the passage be "tried" on a student. The theme is that it is essential to continually "evaluate and improve" either by "subjective evaluation" or by "tutorial tryout".

Chapter 3 explains how the rest of the course is organised. The reader has a choice - to write a self instructional lesson on either a topic chosen by the authors or on a topic of the reader's own choice. The chapter does not contain much "body" but the flow chart showing the structure of the course was useful (though it would have been even more useful if it had appeared in chapter 1). Chapters 1 and 3 (but not others) use margin "signposts", a technique which makes revising particular points so much easier.

There are nine tasks to complete in the "Planning Your Lesson" phase of Chapter 4. The tasks include identifying student characteristics, locating source materials, reading the literature, constructing aims and objectives, identifying constraints, selecting content, ordering content, and estimating student workload. Of particular interest are Tasks 6 and 8. Task 6 included a clear exposition of how the authors actually planned Chapter 4 - describing fully the lengthy process of setting objectives, drafting, brainstorming, identifying chapter headings and redrafting. Task 8 concerned the difficult task of "deciding on the order of presentation" where the oft-forgotten fact that 'the most logical order of presentation ... may not be the most suitable order for teaching purposes' is noted. The usefulness of educational techniques (such as concept maps) in deciding on the order of content are introduced in a practical, unpretentious way.

Chapter 5 is about "Writing Your Lesson" and together with Chapter 4 forms the
focal point of the book. There are three main messages in this chapter. One
is that self-instructional material should possess the characteristics of a
good tutorial rather than those of a scholarly paper. The authors argue that:

> the good tutorial is an <u>interaction</u> between tutor and student which
> hinges on the tutor's desire that the student <u>do something with the ideas</u>
> being discussed and the student's desire that he gets <u>feedback</u> from the
> tutor about what he has done. (emphasis added, p.152-3.)

This is inextricably tied up with the second message in this chapter, viz. that
the student should be actively involved. The authors argue that a tutorial
approach can be built into printed materials via the device of asking questions
at suitable intervals, or of setting exercises (a device used to full advantage
by the authors in this book!). Various types of exercises including an
innovatory section on the use of games in the printed media are discussed. The
third message in Chapter 5 is about language. The advice given is to create a
style with a "light touch", a conversational style using personal pronouns,
active verbs and contractions. The authors do not consider the possibility
that tertiary educators may adopt an impersonal style as a deliberate technique
to illustrate objective, dispassionate writing. It is also unfortunate that
the authors do not recognise the importance of non-sexist language. (Indeed
they refer to students and readers almost exclusively as "he"!).

Chapter 6 covers assessment of students, Chapter 7 is about layout and
presentation details and Chapter 8 returns to the theme of Evaluation. All
three chapters contain useful, though not central, material.

By far the best Chapters are the two central "planning" and "writing"
chapters. The main fault with the book is the failure to discuss why self
instruction is to be preferred to other forms of teaching. The book does not
discuss the reasons behind the advice given and there is no attempt to place
self instruction in perspective. For example, the self-instructional design
espoused is highly didactic, at a time when the education literature
demonstrates a wide interest in "open learning" and "independent study". There
is also no discussion concerning the "efficiency" of self instruction, that is,
is the benefit (in terms of student learning) justified by the huge (time) cost
of production when there are less time consuming alternatives? The authors
anticipate some of this criticism in the first chapter by excluding such
discussion from their objectives. They say that they wish their readers to
write self-instructional lessons, not to write about them. Nevertheless, it is
important that a subject expert understand at least the basis on which "good
advice" is formed. It is also frustrating for readers who wish to follow up
particular points to find that no sources or further reading are provided.

Despite these minor criticisms of omission, the book is essential reading for
anyone preparing written material for students. It is a particularly welcome
complement to the "instructional design" discussions appearing recently in the
distance education literature.

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Browsings

C.D. Broad once remarked of the writings of Hegel and his followers that they: 'seem to start from no discoverable premises; to proceed by means of puns, metaphors and ambiguities; and to resemble in their literary style glue thickened with sawdust.' Even Hegel would have been baffled by some of the jargon currently inflicted on the public by communication specialists. A recent description of new Telecom PABX equipment included the following: 'These instruments are intelligent microprocessor controlled terminals which enhance the feature capabilities offered by the system.' One of these features is said to offer the user an opportunity to be 'pre-informed' about the identity of a caller before accepting a call. I am reminded of a notice in a shop window advertising 'pre-chopped' firewood.

Some academic writing is equally impervious to sense. A study in the USA, reported in The Times, 9 June 1980, found a strong positive relationship between the incomprehensibility of papers and the prestige of the journals which published them. It seems that clarity and readability should be avoided by authors who hope to present their work in 'quality' periodicals. Perhaps this helps to explain why the man on the Clapham omnibus so frequently uses 'academic' only in a pejorative sense.

An author searching for a comprehensive title would find it difficult to improve upon Aging from Birth to Death, edited by M.W. Riley (Westview Press, 1979), Titles searching for authors would surely find it impossible to do better than a paper in Physics Letters, 7 July 1983, by G. Arnison et al. One could imagine the dismay of an editor who, after requesting full details of a reference, was supplied with a list of 138 joint authors!

The educational sections of autobiographies rarely have much to say about what the author learnt at school or university, being mainly concerned with information about people and places. This is true of Anthony Powell's To Keep the Ball Rolling, (Penguin, 1983), although it does include mention of one event of interest to teachers. When he went up to Oxford in 1923 his tutor was C.G. Stone, who suffered from a stutter and deafness. The latter, however, did not prevent him hearing the first sentence of Powell's first essay: 'The close of the Dark Ages fell on Christmas Day in the year 800, when Charlemagne was crowned in Rome as Emperor of the West.' Stone at once interrupted with: 'Don't start your essays with that sort of metaphorical clearing of the throat.' Powell recalls that this: '... made me think about writing in a way I had never done before .... I now saw in a flash the importance of structure.'

One of the more amusing anecdotes concerns Gilbert Murray of whom a visiting notability had asked: 'Are you interested in incest, Professor Murray?', to which the Regius Professor of Greek replied: 'Only in a very general sort of way.'

As Colin Flood Page points out in his contribution to this issue, there is something very puzzling about the antipathy displayed by many academics towards the very notion of adopting a professional attitude towards their teaching responsibilities. That this is not a recent feature of academic life is evidenced by the following quotation from a book published in 1906 by F. Paulsen, The German Universities and University Study, (London, Longmans):

Even greater than those against the theory of university pedagogy are

my doubts about the planned practical lecture course, the 'seminar for
university teachers.'   It seems to me that even the name has something
strange, even comical,about it, provoking never-ending further education:
seminar for teachers conducting a seminar for university teachers, and
so on ad infinitum .... somewhere the thing will have to stop.

Unlike the provision of resources to support staff development, the prolifera-
tion of academic journals shows no sign of coming to an end.   In 1800 there
were 100 scientific journals but by the end of the century there were 10,000.
There are now estimated to be about 110,000 publishing about 7000 papers each
working day making a total of around two million each year.   If you are
looking for help in coping with this flood of information then you will find
it in a very useful book by V. Stibic, Personal Documentation for Profess-
ionals, (Amsterdam, North-Holland, 1980).   The same author (and same pub-
lisher) has also produced Tools of the Mind (1982), a comprehensive guide to
the techniques and methods of intellectual work.   Both books also have the
merit of being clearly written.

NOTES FOR CONTRIBUTORS

Contributions are invited, dealing with any aspect of higher education, which seek to improve practice through research, evaluation or scholarly reflection. Papers concerned with both the practice and theory of higher education in specific disciplines are welcome. Contributions which cut across specialist disciplinary or research interests to focus upon the central concerns of higher education will be especially welcome. Authors are also encouraged to publish brief research reports and make detailed data available to readers on request. Each issue will include a major review of an area of educational practice or research: those interested in preparing such a review should contact the editor. Book review articles and critical notes will also be published.

Manuscripts should be sent to the editor, c/- TERC, P.O. Box 1, Kensington, N.S.W. 2033, Australia. Three clear photocopies should be sent and the author should retain the original (as the photocopies will not be returned). Manuscripts should be typed on one side of the paper, be double-spaced, have ample margins, and include an abstract of 100—150 words. Authors may find it convenient to prepare the manuscript in the format used by the journal. The authors of papers which are accepted for publication will be required to prepare the final copy in camera-ready format: details of this will be sent upon acceptance. It will be assumed that submitted papers have not been published elsewhere and are not currently being considered by another journal.

Offprints will not be supplied. Contributors will receive three copies of the issue in which their paper appears.

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IN THIS ISSUE