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**Learning and Literacy Development in Higher Education: An Issue of  
Institutional Change**

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**Abstract**

Commitment to teaching and learning in higher education has long been premised on assumptions that:

on enrolment, students are already equipped with generic skills of learning and literacy suitable for tertiary study; when they do not have the necessary skills, or do not begin to develop them appropriately, it is a remedial problem; and, that those responsible for development of generic and discipline-specific learning and literacy skills must be situated outside of the body of academics teaching in an academic program.

These assumptions are no longer tenable. It is now recognised that academic success in higher education entails the acquisition of academic learning and language skills which are new to our average student at university entry. Facilitating the acquisition of such skills is thus not seen as a remedial strategy but a developmental goal which allows all students to be initiated into the academic and professional discourses of academia, and which gives all students greater chances to achieve at their potential.

Integration of instruction in learning and literacy skills into mainstream teaching programs through curricula change, revised graduate outcomes and staff development is essential to this goal. Achieving these objectives, however, requires institutional change which is often problematic in traditional university contexts. The presence of leadership, change agents and discontinuity can provide the impetus for such change to occur. This paper will discuss institutional change in this context with an illustrative case, using examples from past and current work being carried out at both the above institutions.

**Introduction**

Recognition is emerging in higher education that all students arriving at universities need to develop learning and literacy skills suitable for their new environment (Ballard & Clanchy, 1988; Drury & Webb, 1990;

Golebiowski, 1997). One aspect of this need arises from the new times in which higher education finds itself ( an era of mass education with a policy trend towards universal post secondary education (West 1997, p.4) and where the diversity of students' backgrounds in terms of language and culture is greater than ever. The second, and more important aspect, arises from the differences between the skills which are required for secondary school and

those generic and discipline-specific skills which are necessary for success in the tertiary setting. In earlier times, as Baldauf (1997) suggests, it was assumed that students would acquire these new tertiary skills by 'osmosis' over the course of their studies. Such an assumption means that many students may have failed in the past to achieve at their intellectual potential because they were not able to develop these skills well enough or quickly enough. This outcome is no longer acceptable to the Australian community in these new times.

Recognition of this need for learning and literacy development has led to higher education institutions adopting strategies which assist in the acceleration of students' acquisition of necessary skills. Strategies implemented have varied. While some institutions have provided Learning Centres where students receive individual assistance with learning and literacy issues outside of the curriculum from learning skills lecturers ( which can be seen as a 'remedial' approach to learning development), some have also adopted a more pro-active 'integrated' approach in which learning skills lecturers collaborate with content lecturers to provide assistance to students inside the curriculum. In practice, this pro-active approach often constitutes curriculum development and associated staff development. Learning skills lecturers become involved in assessing the curriculum to assist in determining which learning and literacy skills are required by students to be successful within the course, redesigning the curriculum to include planned instruction in these skills, and producing resources to supplement whatever face-to-face instruction might be provided. We strongly support this latter integrated approach because

- it is tailored to the needs of the curriculum and the students,
- it is offered at the time required by the curriculum and needed by the students,
- it provides the focus on literacy which is necessary if students are to see the relevance of literacy to the command of content it is offered equitably to all students.

## Figure 1

This paper suggests that the successful implementation of such a pro-active, integrated approach designed to achieve improved outcomes for students both requires and produces some level of institutional change. This approach and the associated change can be both explained and strategically assisted by the joint application of two conceptual frameworks (Figure 1). The first (an emerging theoretical position) proposes three models for considering learning and literacy development. The second is developed from studies of institutional change. Either framework on its own provides insight but is not necessarily effective for developing a strategic approach to institutional change focussed on learning and literacy development. The explanatory and, we hope, predictive, related set of conceptual frameworks presented here has been developed within what has become an extended action research project in the area of learning and literacy skills development. The conceptual frameworks will be briefly presented and then illustrated by a case study of learning and literacy development at Orange Agricultural College in 1995-1997. The paper will conclude with comment on strategic implications and suggestions for further research.

## The First Framework: a Health Metaphor Model of Learning Development Provision

### Figure 2

Strategies for situation improvement in any context are dependent on the definition of the problem (Majchrzak 1984)). In this section we use a metaphor (Figure 2) approach which conceptualises institutional and individual perceptions of students' learning and literacy skills. This framework offers three models which explain both individual and institutional approaches to learning and literacy development, and which are (nearly) mutually incompatible (we suggest that this incompatibility is a key explanatory feature when we discuss the achievement of institutional change later in this paper). We posit three attitudinal models towards the academic learning and literacy ability of tertiary students which draw on metaphors of sickness and health and which constitute the different models of learning and literacy development in current practice.

Model I To Ignore the Cursed [and Accept the Blessed]

Model II To Cure the Sick

Model III To Improve All

'To Ignore the Cursed' takes a pre-ordained view. It represents the attitude that students entering higher education who do not have adequately developed tertiary academic learning and literacy skills should not even be in higher education. At its worst it implies that there is no hope for improvement; at its more sensitive, it implies that such students must solve their own problems before entering higher education. (The converse of an Ignoring the Cursed attitude can, of course, be characterised as Accepting the Blessed, an attitude in keeping with an elitist view of higher education being undertaken by only a select few.) In this model a 'sink or swim' attitude prevails and no institutional responsibility is taken for developing such students' skills - students so marked must find their own way.

'To Cure the Sick' is a more ideologically correct model which takes into account social justice concerns. Some students entering higher education are acknowledged as inadequately prepared, and it is assumed this inadequacy can be cured in most students if enough medicine is taken. These curatives are made available by specialist practitioners at a special clinic (with names such the Learning Support Unit or Learning Assistance Centre) to which the sick are referred or self-refer. The curative activities are additional to normal expectations of a tertiary student, take place in special location usually not aligned with the faculty of enrolment, and occur in the presence of others who are also sick (or think they are). The curatives may have little relevance to what healthy students and academic staff are doing. Institutions take some responsibility when they set up the clinics, but it is left to students to attend them. Clinic specialists work desperately to hand out curatives, while being unable to meet the needs of all students.

'To Improve All' represents an entirely different view, based on a health maintenance and improvement perspective. This model takes as its premise that all students accepted into higher education will require development of their learning and literacy skills as a part of maintaining and improving their intellectual health/fitness in the new environment. While it is recognised that some students will need more effort than others to develop these skills, this is not seen in a remedial or curative light but in a developmental one. As this attitude considers all students must develop tertiary learning and literacy skills, it becomes an institutional goal and requires transformational change wherever Models I or II have been

dominant. It follows that such development should be integrated into the curriculum as a natural part of all programs.

### The Second Framework: Transformational Change in Organisations<sup>1</sup>

#### Figure 3

The second theoretical framework (Figure 3) which impacts on discussion about the provision of learning and literacy development is that of transformational change in an organisation. Organisations can be seen to comprise the following four major components:

- ¥ the work of the organisation
- ¥ the people (and their knowledge and skills)
- ¥ the formal organisation (those systems, structures, processes and methods developed to assist the 'people' to carry out their jobs in line with organisational strategy)
- ¥ the informal organisation (leadership, common values and beliefs, etc.). (Nadler & Tushman, 1994, p. 17).

#### Figure 4

Transformational change occurs in the presence of three sets of conditions. These are: discontinuity of some type (Levy 1986), key agents, and at least one of a set of enabling conditions often related to resources (Levy 1986). Each of these condition sets, however, does not stand alone but has linkages to the others. Abernathy and Clark's discussion of 'architectural' innovation, for example, establishes these linkages. They note that:

The potential for stimulating architectural innovation seems to hinge on the juxtaposition of individuals with prior experience in relevant technologies and new user environments latent with needs. (1985, p.8).

The first of these conditions, discontinuity, has been widely investigated with regard to technological change but appears less reported as a force in educational change. Discontinuities (triggers) introduce an opportunity (or necessity) which can only be met through transformational change. Discontinuities are discrete and unique elements, the presence or absence of which can be identified and sometimes predicted. Discontinuities may "just happen", may result from the convergence of a number of forces, or may be engineered. Key agents are the human instruments of policy ideas, design and implementation. Most commonly they are recognised as visible leaders or change agents, but the presence of agents who are less visible but none-the-less essential for enabling change is discerned under research conditions. Key agents may 'just happen' to be present but their presence can be engineered.

Enabling conditions are necessary but not sufficient for transformational change. They include: adequate (appropriate) resources; a perception of a need for change (associated with a readiness to cope with change); and appropriate technological advances. (The second of these characteristics connects with the role of key agents and the perception of discontinuity<sup>2</sup>.) Enabling conditions may be, in at least some cases, the most obviously malleable<sup>3</sup>. Adoption of Learning and Literacy Model III the requires an initial transformational change and, once instituted, promotes further transformational change at an organisational level: the "integration approach" not only is able to, but must, affect each of the components to achieve durable success. In the next section, this theoretical position will

be illustrated with a case study of learning and literacy development at Orange Agricultural College, University of Sydney.

### Case Study - Change in Learning and Literacy Development at Orange

#### Agricultural College

Orange Agricultural College is an academic college of the University of Sydney with a focus on agriculture, agribusiness and land resources use within a management context. It enrolls over a thousand students, about a third of whom study on campus while the remainder study by distance education. It maintains a strong focus on learning<sup>4</sup>.

#### Moving to Model III

**First Discontinuity: Changing Expectations.** OAC now offers a full range of courses (most of them vertically articulated) including six advanced diplomas, two bachelor's degrees, two graduate certificates, two graduate diplomas, a master's by course work, a master's by research and the PhD. The move to this full range of courses from a suite of associate diplomas occurred very quickly and in association with the move to the unified national system. The student group diversified rapidly as did the range and quality of expectations of academic achievement.

**Second Discontinuity: The Learning Quality Fellow Project.** The OAC College Board and certain academics in particular recognised this first discontinuity and sought to address the learning and literacy issues which emerged as a result of the changed expectations in 1995. In parallel the University of Sydney, through its Learning Assistance Centre, allocated Quality Assurance funds from the Commonwealth Government's Quality in Higher Education Round II to the University's Learning Assistance Centre and thence to OAC5 to fund the position of a Learning Quality Fellow (LQF) at the end of 1995. The Learning Quality Fellow's primary brief was to work with College staff to develop strategies through which learning and literacy support could be provided to students. These were to include the following strategies:

- ¥ initial and follow-up assessments of the developmental needs of all
  - new first year students, both internal and external, using the MASUS literacy diagnostic procedure (Bonnano & Jones, 1997));
- ¥ the provision of instructional materials to meet the developmental needs of students;
- ¥ provision for continuing assessment and instruction in tertiary literacy beyond 1996;
- ¥ collaborative development of both internal and external curricula to integrate instruction in tertiary literacy into the curriculum;
- ¥ an extension of guidelines and procedures for the assessment and development of the learning and literacy skills of students of the University of Sydney;

Previous to the appointment of the LQF at OAC, the institutional view of learning and literacy was practically describable as Model I even though most individual lecturers professed to be situated in Model II. Lecturers provided commentary and feedback on students' assignments and they could refer students to the University's Learning Assistance Centre (located 260km distance on the University's Camperdown Campus) but generally students were given no formal assistance with developing their tertiary literacy skills. As in most institutions, it was expected that students would come to tertiary study equipped with the

necessary skills. This expectation was not, however, being fulfilled and there was campus debate on whether the students were students who shouldn't be at University (here conceptualised as Model I: Suffering the Devil's Curse) or were merely in need of remediation opportunities which were not available to them (Model II: To Cure the Sick). The opportunity to employ a Learning Quality Fellow under the guidance of the Learning Assistance Centre created a discontinuity by empowering institutional recognition of the situation. Because the Learning Assistance Centre and the subsequently appointed Learning Quality Fellow [Skillen] held a Model III view, the project brought to OAC that theoretical stance and its practical application.

**Key Agents.** The preliminary phase was supported by an emerging key change agent, located in the academic staff, who initiated the change by taking individual and institutional action in 1995. This staff member initiated the involvement of both the head of the University's Learning Assistance Centre and the OAC Learning Committee in a set of actions which not only brought the needed visibility of learning and literacy issues but garnered institutional support for a change. This support was eventually embodied in resolutions of the College Board. The establishment phase was then led by the appointed Learning Quality Fellow (Skillen), an engineered key agent. The LQF at this stage had the support of OAC senior staff, one of whom [(Mahony)] chaired the Learning Quality Project Management Group. The establishment phase was then led by the appointed Learning Quality Fellow (LQF), an engineered key agent. The LQF at this stage had the support of OAC senior staff, one of whom (Mahony) chaired the Learning Quality Project Management Group.

**Enabling Conditions.** Certain conditions existed during the Learning Quality Project which could be described as enabling conditions, i.e. those which enable transformational change. The most important of these were the personality of Learning Quality Project through the person of the Learning Quality Fellow and the moral and financial support of that position. which satisfied enabling conditions comprises additional resources, specific expertise and institutional support. This position led to the satisfaction of some secondary enabling conditions, including changing the profile of learning and literacy issues from Model II to Model III and some specific staff development to improve local expertise within the Model III model.

### Major Change Activities

**Assessment of Students' Skills.** A major aim of the Learning Quality Fellow (LQF) position was to measure the tertiary literacy skills of incoming students in order to assess their developmental needs and in order to provide the most useful assistance within curricula. The MASUS diagnostic procedure developed by the Learning Assistance Centre, The University of Sydney, was used to assess the skills of all new first year students, both internal and external students. The procedure rates students writing on a scale of 1 to 4 in four main criteria:

- ¥ information retrieval and processing
- ¥ structuring and developing text
- ¥ the use of appropriate Academic English
- ¥ grammatical correctness.

In order for academic staff to participate in and take responsibility for this assessment and the development of students' tertiary literacy skills, their own level of skills needed to be developed. While most academic staff had good tertiary literacy skills, they did not always have either the conscious knowledge about what constituted these skills or the specialist language to talk about tertiary learning and literacy. Such knowledge and language is



necessary if students' skills are to be adequately and appropriately assessed and if students are to be provided with high-level feedback and assistance. They need to see clearly where their writing is not well-structured or expressed, where and how it departs from disciplinary conventions and how it might be restructured or rephrased.

**Collaborative Development of Curricula with Integration of Instruction in Tertiary Literacy.** The integration of instruction in tertiary literacy into the curriculum was another major aim of the LQF and was one of the central means by which the brief of providing continuing instruction beyond 1996 was met. This integration occurred via collaboration between the LQF and content lecturers and focussed on the integration of discipline-specific academic skills into the curriculum of both internal and external course-offerings, most particularly at the 1<sup>st</sup> year, first semester level. The rationale for such an integrated approach builds on the recognition of two important points. The first is that tertiary learning and literacy skills such as critical thinking, reading and writing are acquired most readily within the context of the course being studied where students can see the relevance of such skills to the content and requirements of the course and their success within that course.

The second point is that each discipline has its own 'brand' of writing style, or discipline-specific discourse. In order to be successful within each discipline, students must acquire the writing style and conventions of that discourse. This can be achieved much more quickly than is normally the case in 'Osmosis' if such skills are actively taught and are taught concurrently with the content material of the course, i.e. integrated into the curriculum. The acquisition of such skills also provides students with a tool for learning about the content of the discipline, and for conveying that learning within formal, written assessments. They ensure that students have greater success in accessing and assessing information, using information productively in assignments, and in assessment results generally.

**Staff Development.** Implicit in the strategies designed to develop students' skills in generic and discipline-specific literacy skills is the issue of staff development: only if staff have the skills to carry out tertiary literacy assessment and to isolate, integrate and facilitate the necessary instruction into curricula can students develop maximally. Projects such as that carried out at the University of Canberra<sup>6</sup> have focussed on this issue of staff development and have explicitly assisted staff to meet the demands which come with attempting to integrate instruction in tertiary literacy and discipline-specific literacy into the curriculum. Ferguson (1996) notes that academics have the power to transmit such information within the curriculum but often believe that they are not 'teachers of literacy' (p.2) and should not be involved in, or do not have the expertise to be involved in, such endeavours.

These concerns were also voiced at OAC. Although senior management and a few academic staff members were supportive of the project from its inception, the majority of staff were uncertain about their abilities and about their support for the aims of the project and did not feel they should be responsible for assisting the development of students literacy skills. These concerns were met in a number of ways. Firstly, the LQF, and the project management committee, had to 'sell' the aims of the project to staff. This took place in formal and informal staff meetings and informal gatherings. Secondly, a series of staff workshops were held within a course team context<sup>7</sup> in which knowledge about generic and disciplinary-specific literacy conventions, particularly in relation to the criteria being assessed, was made explicit and discussed. During initial familiarisation workshops, staff used this new knowledge to assess students' texts using cross-marking to deal with any problems of inter-rater variability. They then marked singly or in informal groups to facilitate learning transfer, confidence-building and reliability. A second round of workshops was held in preparation for a re-assessment of students' skills at the end of the academic year.

This system of staff workshops for literacy assessment and feedback continued and expanded in 1997 with the move to provide assessment of literacy skills in each assignment submitted by students. This entailed a more concerted round of staff workshops, again in the

course team context, and generated much fine-tuning and discussion about course requirements relating to literacy.

### Outcomes

The rationale for instituting these new strategies at OAC, i.e. those belonging to the Model III view, centred on the recognition that academic success in higher education entails the acquisition of academic literacy and learning skills which are new to the average student at university entry. Facilitating the acquisition of such skills was thus not seen as a remedial strategy but as a developmental one which allows all students to be initiated into the discourse and culture of both individual disciplines and academia and which gives them a greater chance to achieve at their potential. The move to develop curricula in order to offer more inclusive and effective assistance to students constituted a move away from traditional curricula and towards inclusive curricula, towards a staff with a wider set of skills and knowledge in relation to tertiary literacy, towards a belief in the responsibility for teaching and assessing skills as well as content, and towards the inclusion of institutional procedures which symbolise such beliefs. Figure 5The following diagram (Figure 1\*\*\*\*.) details the change which is possible within an institution as a result of offering student assistance in this way and compares this to the lack of change which is the result of offering student support solely outside of the curriculum.

### Assisting students' generic and discipline-specific literacy needs

effective less effective  
 efficient inefficient  
 equitable less equitable

Figure 5

As a result of the project at OAC, the teaching work of the institution expanded, the 'people's' knowledge and skills were extended, systems were put into place to carry out the new aims of the institution and values and beliefs about learning and literacy changed. Nadler and Tushman suggest that when there is a change which brings such a 'complete break with the past and a major reconstruction of almost every element of an organisation' (1994, p. 22), the change can be described as discontinuous change. While the project at OAC did not produce the catastrophic kind of change sometimes seen in large business organisations, it did facilitate the kind of change that epitomises discontinuous change, i.e. change in which the people and the organisation are asked to learn 'new ways of thinking, working and acting (Nadler & Tushman, 1994, p.23). Thus the initial system discontinuities identified in an earlier section lead to further, localised transformational change. This change was assisted by the other two sets of conditions referred to above: the presence of key change agents and enabling conditions.

The project impacted on the institution in a number of positive ways in a relatively short time. Change took place in all four of the major components of the organisation. This change can be represented by the following diagram (Figure 6 2.).

Figure 6

### The Work of the Organisation

The organisation accepted the responsibility for students' learning and development in terms of literacy, as well as content, i.e. the 'work' of the institution expanded to include provision



for the teaching and assessment of generic and discipline-specific literacy and learning skills inside the curriculum. Variety in the provision of assistance was also achieved: assistance was offered in face-to-face mode inside the curriculum, in written materials available outside of the curriculum and in distance mode as written resources integrated into curricula.

### The People

The most important change in relation to the 'people' was an increase in academic's conscious knowledge about tertiary literacy practices and conventions. While most academics could cite certain conventions about both generic skills and those pertinent to their own disciplines, much of their knowledge was unconscious: apparent in their own writing but not able to be explained or expressed. The project generated a greater level of awareness about these conventions giving academics an increased ability to make such conventions explicit to students.

A second change was observed among the student population. As concerns and expectations of learning and literacy skills were made more visible to students from developmental as well as evaluative perspectives, demand for developmental assistance by individuals and groups increased. Specific changes were reflected in re-assessment of students' tertiary literacy skills which was made at the end of second semester, after students had received assistance both inside and outside the curriculum, found that skills had improved considerably over the nine months of the project (Skillen, 1997). The results for the total cohort studied<sup>8</sup> show that there was an overall increase in ratings across each of the MASUS criteria. This increase consisted of slightly higher ratings for criterion A and significantly larger increases in ratings for Criterion B and C. The increased ratings in B and C (structure and development of the answer and the use of Academic English) were particularly important because these could be said to comprise the core skills of Academic English and because Criterion B proved to be the least developed skill in the first assessment.

Other changes relate to a rise in interest in researching educational practice, particularly those practices to do with curriculum development and innovative teaching methodologies. Research in disciplinary areas had been seen as particularly worthy; the project helped to validate research into education itself.

### The Formal Organisation

Formal procedures within the organisation were also changed to reflect academics' increased responsibility for the development of students' tertiary literacy skills. The OAC College Board adopted procedures to ensure that students' literacy skills were formatively assessed, as well as their control of content, and that students received formal feedback about their levels of skills. Procedures were also initiated to ensure that academic staff themselves had the skills to assist students.

### The Informal Organisation

A change in values occurred in regard to the nexus between teaching, learning and literacy. Like academics elsewhere, the common belief was that instruction in literacy was not the responsibility of the higher education system, individual institutions or individual academics but was the responsibility of someone else in the community. This belief gave way to an acceptance that assisting students to develop the skills suitable for tertiary study and for particular disciplines was the responsibility not only of the system, institutions and individual lecturers but also of the curriculum because the nature of the skills are so specific to this domain. Another belief that was engendered by this new perspective on learning and literacy

was that more successful learning and teaching could take place if students were assisted to develop the skills required by the context of study during the learning and teaching process.

## Conclusions and Further Research

### Figure 7

Learning and literacy issues in higher education institutions require examination and subsequent strategic planning for change underpinned by a combination of theoretical perspectives (Figure 7) if students are to be assisted to reach their intellectual potential and if the needs of Australian society are to be met and national goals in relation to literacy reached. One perspective is that learning and literacy development in higher education must move to one committed to the development of appropriate discipline-specific tertiary skills in all students in higher education regardless of the level of skills with which they commence their studies. The other perspective is that transformative institutional change must occur in most universities if student's developmental needs are to be met. Such change is seen by the authors to be complex and requiring a constellation of organisational elements present over a sufficient period of time to succeed.

The authors are currently continuing their research at the Orange Agricultural College case study site, and are using the University of Wollongong as a second source of case study sites. Not only does the robustness of the value of the conjoined conceptual frameworks need to be further tested, but further work is also needed on the relationship between organisational unit (in size, in location within a complex institution such as a university) and a successful move to Model III of learning and literacy development.

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### Notes:

1 This section draws on unpublished work by Mahony (1994). 2 Discontinuities which are not perceived cannot contribute to managed change. There is much literature (marketing and technological innovation) pointing out blindness to opportunities which can be read as unperceived discontinuity.

3 Malleability indicates the extent to which the factor can be affected by policy actions (Majchrzak 1984). This malleability can be formal (as in the formal allocation of resources by budget and staffing plans) or informal (such as when an insufficiency of official staff resources may be resolved by unpaid overtime and contributions of friends and family members).

4 "The College will support the development of quality learning outcomes in students, such as deep learning, understanding, intellectual curiosity, critical and creative thinking, problem solving and other lifelong learning attributes. It discourages techniques which result in surface learning." (Orange Agricultural College Strategic Plan 1996-2001, p.9)

5 OAC was one of three satellite campuses to benefit from this allocation, the others being the Sydney College of the Arts 6 This was the "Project for the Integration of Literacy Skills into the Disciplines" which was part of a National Priority Reserve Fund Grant. 7 The 'course team' comprises all academics responsible for developing and delivering a program leading to a formal academic award together with instructional design and student support specialists who are associated with that course team.

8 Fewer students were included in the second assessment because the units which were chosen as the basis for assessment in second semester were not units of study for all of those assessed in the first assessment.