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STRATEGIC HIGHER EDUCATION RESOURCE PLANNING AND ANALYSIS:

SCHOOL OF NURSING CASE STUDY

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INTRODUCTION

This study is based on a project commissioned by the Dean of the Faculty of a post 1987 Victorian University to focus on the problems, issues and possible future strategies with respect to resource allocation and planning within the School of Nursing. The key objectives of this study are as follows:

- To consider current and future external financial forces facing the School in terms of the macro environment.

- To analyse the existing deployment and utilisation of human and financial resources within the School with a view to diagnosing any key problems and concerns.

- To compare the resource utilisation data with other academic organisational units within the University and the Higher Education system as a whole, subject to availability of information.

- To synthesise possible resource allocation and planning strategies for the future with respect to the School of Nursing. It may be possible that these suggestions may be also taken up by the Faculty and indeed the University as a whole.

In this paper, the key findings of the project are analysed and their relevance to academic organisational units of the University and other higher education institutions facing similar concerns are postulated.

LITERATURE REVIEW

Otten and Savenije (1999) suggest that budget allocation is an important policy instrument both in terms of Government control of institutional behaviour in Higher Education, as well as determining the relationship between Central University administration and departments. These authors also suggest that funding models should be based on more global and simple principles, otherwise the
details of the model may become a principal issue of internal political interest and discussion.

Smith (1992) indicates that Higher Education Institutions have experienced an increased need to reallocate resources in order to meet the realities of enrolment decline and fund restriction and that under such circumstances there will be increased demand to use cost comparisons as an analytical tool for resource management. This also highlights a number of problems in collecting comparable inter-institutional cost data, including the fact that components of the expenditure reported tend to vary from University to University. Some cost differences can be explained to a minor extent by the location of the Institution; and those cost-comparisons do not often take into account institutional quality.

Savenije (1992), when considering the University budget as an instrument for planned change, reached a number of conclusions. This author states that, given the political nature of the University environment, the budget is only a limited instrument for implementation of strategic change. Savenije (1992) further suggests that in order to stimulate changes at the faculty level, control devices are more effective than a detailed planning instrument. He concludes that control functions should not be restricted to financial strategies, as their effectiveness is limited by the difficulties in measuring and monitoring outputs.
In addition to studying costs and funding models, international researchers have also focused on the issue of faculty salaries. Toutkoushian (1998) explains that self studies are in response to changes in external labour markets, which require institutions to adjust their offers to newer (Junior) faculty in order to attract applicants, while failing to adjust salaries for their faculty already on staff (Senior Faculty). This usually results in the phenomenon of salary compression. It is suggested that salary compression is a problem in the American University context, since it represents discrimination against senior workers and could lead to reduced morale among those staff with more seniority.

Restructuring of the Higher Education system in Australia was accompanied by the review of resource allocation. Doyle (1994) points out that following the commissioning of research on relative teaching costs and consultation with universities regarding a funding model, the Commonwealth Department of Education, Employment and Training developed the Resource Funding Model (RFM), based on a two dimensional matrix, using discipline costs as one axis and course level on the other. A limited number of teaching cost categories was selected in order to keep the model simple. The relative weightings of each cell in the matrix were established from the findings of the three cost studies. Doyle (1994) applied the Activity Based Costing approach to several Australian Universities and found that part-time students’ costs were higher than that applicable to full-time students. However, that study showed that University Administrative and Support activity costs were driven by student enrolments and not student load. This is relevant to the nursing case study where a significant proportion of the post graduate students are part time.

A recent Federal Ministerial Paper on Australian Research Training inter alia, considered issues concerning funding of research in Australian Higher Education. It creates a new framework for research funding in Australia, proposing performance based funding for research student places and research activities in Australian Universities with the allocative formula and transitional arrangements designed to ensure that all Universities are able to compete fairly under these new arrangements (Kemp, 1999). The Australian Government has also signaled the need to review the RFM in order to
implement the recommendations of the ministerial paper on research. KPMG has been commissioned by DETYA to undertake some preliminary work to underpin the revision of Australia’s funding model for Higher Education. But recent articles in the media suggest that this has become a contentious issue, requiring perhaps further interaction between the AVCC and the Government.

THE EXTERNAL FINANCIAL ENVIRONMENT

Following the abolition of the binary system of higher education in 1989 a new funding model was developed to level the playing field in higher education. The development of the relative funding model (RFM) was underpinned by three higher education cost studies commissioned by the Federal Government. The RFM had two dimensions – one being the discipline cluster and the other the level of academic program. At the undergraduate level there were five discipline clusters, with the lowest given the weighting of 1.0, which included broadly the business disciplines and law and the humanities. At the top end in Cluster 5, the disciplines included science and technology disciplines. Nursing and the health sciences were included in undergraduate Cluster 3 with weighting of 1.6. There were only two clusters included for higher degree research programs. Nursing and health sciences in the bottom cluster, were given a weighting of 2.0 whilst the higher cluster inter alia included medicine, dentistry, etc. with a weighting of 4.7. There were three discipline clusters for postgraduate coursework programs, with nursing and health sciences being in the middle cluster and attracting a weighting of 1.8. These weightings were then applied to the student load (EFTSU) to compute the weighted student load (WEFTSU) which then were utilised to allocate funding to the universities. Of particular significance to Nursing was the allocation of only 20% of the relevant RFM funds to industrial experience.

Since the development of the Unified National System of Higher Education (UNS), a number of significant changes have been introduced by the federal government in terms of the funding of universities as follows:
In recent times no growth in terms of student load has been allocated to Victoria.

The Federal Government has demanded that universities increasingly diversify their funding sources away from government and include self-generated revenue (SGR) activities. The table below compares the reliance of the case study University on government funding from 1995 to 1998. It shows that dependency on government funding has declined from 80.5% in 1995 to 73.3% in 1998. However, the table also shows that an average member of the UNS has less reliance on government funding than the University under study.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PERCENTAGE GOVERNMENT FUNDING</th>
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<tbody>
<tr>
<td></td>
<td>Case Study</td>
</tr>
<tr>
<td>1995</td>
<td>80.5%</td>
</tr>
<tr>
<td>1996</td>
<td>76.9%</td>
</tr>
<tr>
<td>1997</td>
<td>74.1%</td>
</tr>
<tr>
<td>1998</td>
<td>73.3%</td>
</tr>
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</table>

Federal Government funding of higher education has reduced in cash terms by 5% between 1997 and the year 2000. However, in real terms this reduction is far greater since, apart from minimal safety net adjustments, there has been no supplement for salary increases. Commentators have estimated that the real reduction in Federal Government funding will be closer to 20% between 1997 - 2000. In the case study University, there has been a salary increase of 12%, to be implemented over three years.

In addition to reducing the Federal Government funding of higher education, the student load has also been reduced at the postgraduate level. This fact has meant that postgraduate coursework programs have effectively been largely privatised in terms of the higher education sector. Indeed, apart from postgraduate research programs, most Australian universities have very little in the way of government funded postgraduate coursework student load.

However, at this stage, postgraduate courses in nursing are still HECS funded at this University, in recognition of the inherent problems in attracting nurses to post graduate studies.
Due to the decline in real funding of universities per student load unit, the ratio of student load to academic staff (academic SSR) has also increased very significantly. For instance, in health sciences, including Nursing academic organisational units, the academic SSR increased from 11.4 in 1993 to 12.9 in 1997 – an increase of 13.2%. Significantly it is noted that this increase occurred prior to the Federal Government cuts in higher education and discontinuation of salaries increase supplementation. Figures released recently by the AVCC indicate that the academic SSR for Health Sciences had increased to 13.2 by 1999 or a cumulative increase of 15.8% since 1993 (AVCC, 2000)
UNIVERSITY-WIDE VIEW IN TERMS OF RESOURCE ALLOCATION

Clearly the Federal Government policies have impacted on the University as a whole. For instance as previously seen (refer to Table 1 above) the proportion of government funding has declined. Since the University also utilises the relative funding model, decreases in funding have been passed on to the various faculties through the central model. Key emerging themes in terms of comparison at the University level yielded the following results:

The DETYA statistical collection indicates that the 1997 academic SSR for health sciences for the UNS as a whole was 12.9. However, the University’s health sciences sustained an academic SSR of 11.4 – 11.6% more favourable than the UNS average. However, due to the inclusion of the very expensive disciplines including medicine, dentistry, etc. in terms of the older universities in health sciences, the actual comparison is far worse. For instance, the academic SSR in the health sciences disciplines at University of Technology – Sydney (15.6), RMIT (16.6) and Curtin University of Technology (14.1) are far higher than the UNS average. Given the previously mentioned reduction in Federal Government funding to higher education, it will be difficult to sustain the current academic SSR in health science at this University of Technology, which like UTS, RMIT and Curtin University, will be attracting less funding per EFTSU than the G8 universities (e.g. University of Melbourne), who have greater research funding and include more favourably funded disciplines such as Medicine.

This University essentially allocates funding to the Faculties on the basis of the RFM, taking into account flag fall and certain strategic allocations. At the University wide level, the key determinant of the funding of the faculties include the following:

- The level of funding provided by the Government and revenue from other streams.

- The balance of funding between the faculties and the central services units.

The latest DETYA Financial Collections (1998) suggests that the University expended approximately
62.0% of its expenses on academic activities whilst an average member of the Unified National System of Australian Higher Education expanded 61.7% on academic activities. Accordingly, it can be seen that this University allocates a slightly higher priority to expenditure on academic activities than an average UNS member. Notwithstanding the fact that academic activities constitute the core business of the university and hence, this expenditure should be maximised, the National Statistics suggest a reasonable allocation of funding to the academic activities at this institution.

In view of this, the university’s resource planning processes appear to be reasonable and the School of Nursing will find it difficult to obtain a greater injection of resources from the centre. The locus of the problem, hence, appears to be within the school or the faculty but not at the university wide level. Nevertheless, some would argue that the RFM discriminates against a practice-based discipline.

**RESOURCE ALLOCATION AND PLANNING IN THE SCHOOL OF NURSING**

The School of Nursing was formed in 1998, following the amalgamation of two established Nursing units within the University. The long term benefits of the amalgamation with regard to the maximisation of resources was initially offset by short term deficits. Firstly, the School was initially operating across two campuses, with the subsequent need to repeat lectures in the undergraduate program. Secondly, the ensuing skill mix of staff within the School following amalgamation and voluntary departures was unbalanced, thus requiring employment of sessional staff. Thirdly, the undergraduate curriculum for the new School was essentially a political document, where pragmatic considerations took precedence over economic rationalisation. Finally, although the SSR of the new School was too low, as all but two of the academic staff were tenured and no further voluntary departure packages were available, reduction of staffing costs was limited to sessional employment and natural attrition. In addition, the academic staff was granted a 12% salary increase, to be implemented over three years, from 2000 to 2002.

As with other regulated professions, registration requirements impact on the overall cost of course
delivery. The Nurses Board of Victoria demands that the clinical practicum be no less than 40% of the total curriculum and students be supervised on a ratio of 1:8. Thus, the clinical component of the undergraduate course is extremely expensive and adds an additional burden to the salary component of the budget. As noted earlier, this industrial component of the course attracts a low allocation of RFM.

Resource analysis undertaken in this section is based on the data provided by the School. A major limitation of the study is that most of the data were only available at the school level and hence not permitting analyses at subordinate organisational levels. Further, the data prior to amalgamation in 1998 was not specifically for Nursing.

The following are some of the financial and other related resource problems emanating from the analysis of the 1998 to 2000 (provisional) data for the School of Nursing:

Table 2 specifies the surplus or deficit situation for the school over the 1998 to 2000 triennium.

<table>
<thead>
<tr>
<th></th>
<th>SURPLUS (+) OR DEFICIT (-) OF INCOME OVER EXPENDITURE</th>
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<tbody>
<tr>
<td></td>
<td>1998</td>
</tr>
<tr>
<td>Amount ($)</td>
<td>-61,000</td>
</tr>
<tr>
<td>Surplus as % of total funding</td>
<td>-1.9%</td>
</tr>
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</table>

The above table reveals that the School has a growing financial deficit. This is substantially due to the recent salary increases.

An often-used cost efficiency measure in Higher Education is the expenditure per student load unit. In Higher Education student load is measured through the utilisation of the metric equivalent full time student unit (EFTSU) with another measure being weighted EFTSU where the student load is weighted according to the RFM discipline weights. These measures are as follows for the School of Nursing in respect of 1998 to 2000:
The above student load measure provides the taught load for the School of Nursing in respect of 1998 to 2000. Here it is very important to distinguish between taught load and “enrolled” load. The latter refers to the programs in which students enrol and related to each of the sub-academic units, whereas the former refers to where the load is actually delivered – it is noted that this can be from other schools of the University. In Nursing, three service disciplines teach into the undergraduate course; science, psychology and sociology. Table 3 shows that taught EFTSU and weighted student load decreased by 19% between 1998/00 for the School of Nursing. Such a large decrease is due to loss of post graduate EFTSU to other disciplines in the Faculty, the rationalisation of the nursing programs and consolidation on one campus.

The student load figures can be used to compute the expenditure per EFTSU and weighted EFTSU in respect of the School of Nursing.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>EFTSU</th>
<th>WEFTSU</th>
</tr>
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<tbody>
<tr>
<td>1998</td>
<td>653</td>
<td>1064</td>
</tr>
<tr>
<td>1999</td>
<td>632</td>
<td>1040</td>
</tr>
<tr>
<td>2000</td>
<td>528</td>
<td>862</td>
</tr>
<tr>
<td>% change 1998/00</td>
<td>-19.1%</td>
<td>-19.0%</td>
</tr>
</tbody>
</table>

The table above sets out the unit cost figures. It reveals that cost per EFTSU decreased very slightly from $4689 in 1998 to $4633 in 1999 (-1%). Table 4 shows the reductions in unit cost by object of expenditure between 1998 and 1999. It shows that the full-time general staff salary unit cost was
reduced by a massive 62%\(^1\). However, the clinical /practicum unit cost increased significantly (+37%). Academic staffing unit cost reduction was only 3% and non-salary unit cost declined by nearly 6% over this period.

An important planning measure is the notion of average class sizes. The general perception is the greater the average class size, the more efficient the teaching and learning process. However, it is noted that it may not be the most effective in terms of actual learning that may occur. Unfortunately data was only available at the School level for the computation of average class size and hence no inferences can be drawn at a program or discipline level with respect to this key performance indicator. Overall the School of Nursing’s average class size increased from 28.2 in 1998 to 30.1 in 1999 – an increase of just under 7% (+6.7%). As average class size increases so does the cost efficiency of the teaching process, but again not necessarily its effectiveness. It is noted that average class size is influenced by a number of factors including subject enrolments; mix of lectures, tutorials and practicum / laboratory classes; and by certain physical factors including availability and room size. This was further complicated in the case study through the teaching into three curricula (one new and two existing) following amalgamation of the two nursing groups over two campuses.

An additional measure of academic efficiency is the academic SSR, which takes the ratio of student load to FTE staff. The table below provides this measure for the two broad categories of staff within the School of Nursing. It shows that academic SSR increased from 13.3 in 1998 to 16.7 in 1999. The latter is very close to the RMIT ‘best practice’ established in 1997, as mentioned earlier. The total SSR increased by just under 32% between 1998 and 1999 for Nursing, a reflection of organisational changes, where student administrative functions shifted from the school to the faculty.
<table>
<thead>
<tr>
<th>TYPE OF STAFF</th>
<th>ACADEMIC SSR</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1998</td>
</tr>
<tr>
<td>Academic Staff</td>
<td>13.3</td>
</tr>
<tr>
<td>General Staff</td>
<td>159.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>12.3</td>
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In summary, the following are significant resource or related issues facing the School:

Table 2 reveals a growing financial deficit faced by the school. This is at least in part due to the Federal Government’s policy of lack of salary supplementation to the publicly funded universities. Unless government policy settings are changed, despite the government and DETYA’s rhetoric, quality of Australian higher education is likely to suffer from the increased SSR.

The non-salary costs declined from 8.3% of total expenditure in 1998 to 7.9% in 1999; significantly below the ideal level of non-salary expenditure. Low non-salary expenditure may lead to a deterioration in the quality of delivery of programs, as expenditure on resources and staff development may be inadequate. In the longer term the non-salary expenditure rate may be unsustainable, with significant pressures to increase the budget in this area.

However, some of non-salary expenditure does not show in the budget; for example, the University funded refurbishment following relocation. As well, extraneous earnings of staff are placed in personal accounts for staff development.

The minimal general staffing of the School could be seen as a weakness. In particular, it may result in significant administrative burdens falling on academic staff. It is worth mentioning that the restructuring of the administrative functions in the faculty have in some cases increased the administrative loads of academic staff. Following from the above, the issue of balance between
expenditure on academic staff, general staff and non-salary costs is also a potential problem. This issue is considered more specifically in the next section.

At this stage it should be noted that academic SSR, weekly prescribed course hours, average class size etc. are key performance indicators in terms of staffing of the teaching effort of the disciplines taught within the School. However, from a financial perspective the most important factors are as follows:

- Is the discipline in surplus or deficit?

- How cost efficient is the discipline ie. is the cost per EFTSU or WEFTSU high (inefficient) or relatively low (more efficient)?

For instance, a particular discipline may have relatively low academic SSR but is still cost efficient due to the utilisation of a greater proportion of the cheaper part-time academic staff (since average salary per FTE academic staff is far greater for full time appointments). In view of the foregoing, the School may wish to focus on cost efficiency issues and fairness in financial allocation processes and as a second phase (when a discipline has a deficit or has relatively high unit cost) examine other KPIs (including staffing measures) to diagnose and reform the underlying causes and resource problems.

Also, is it worth mentioning the built in disincentive to reduce class contact hours. The academic union has negotiated with the management of the university for staff contact hours of 12 hours for research active and 14 hours for non-research active academics. People are worried about reduced hours and job security.

The above issues focus on the resource problems confronting the school. In order to balance this, we also need to consider the effectiveness domain. In Australia a growing emphasis is being placed on the Graduates perception of teaching and learning in Higher Education. One such instrument is the Course
Experience Questionnaire (CEQ) that accompanies the graduate destination survey. The CEQ for nursing programs indicated the following:

- A negative score for the undergraduate program on the good teaching scale.
- Negative scores on appropriate workload in many of the courses.

In addition to the CEQ survey, the GCCA also undertakes the graduate destination survey. There are two important outcome measures, which emanate from this destination survey, namely, full time graduate employability and percentage of graduates proceeding to full time study; indeed the Commonwealth regards these two key performance indicators as measures of positive outcomes from Higher Education Studies.

A striking feature of this data is the very high employability results obtained. It must be noted here that the current nursing shortage has a positive outcome on nursing graduate employment. At the same time, due to the almost 100% full time graduate employability, the proportion of nursing graduates going on to full time study is minimal.

POSSIBLE FUTURE STRATEGIES TO ADDRESS RESOURCE ISSUES IN THE SCHOOL OF NURSING

Clearly the staff from the School of Nursing need to address the financial and resource issues facing the School as a whole. In the collegial system such as that operating within a University, it is important that challenges are shared across the School because it is at that level that solutions can really be generated and effectively implemented. However, the difficulties faced by people following restructuring must be acknowledged, as it takes time to develop a shared vision and overcome the inherited practices of the past.

What follows is a range of short-term and long term strategic options by which the School may
address the resource problems previously identified.

**Reduce the sessional and clinical/practicum budget of the School.**

The School expends a significant proportion of its staff related budget in sessional academic and clinical/practicum costs. Under this scenario, the budget would be reduced over the short term so as to make more room for non-salary expenditure. Full time and fractional full time academic staff would make up the load responsibilities for sessional staff. This strategy, whilst attractive in the short term, does have some short falls. The strategy is advantageous, since it preserves the number of full time and permanent academic staff of the School. However, such a scheme assumes that permanent academic staff have the time and the relevant contemporary clinical skills required. As well, sessional and clinical/practicum staff make a very valuable contribution and provide a diversification of the body of knowledge within the School. They also provide the necessary resource flexibility within the School and should not be reduced to too low a level.

**Review and reform the academic curriculum**

Given the large reductions in Government expenditure on higher education per student load unit, most universities are reviewing and reforming their curriculum in order to both reduce the cost and enhance the learning experiences of their students. This reform movement is driven by a number of forces, including the need to move away from class contact hours to enhanced learning via the utilisation of the latest information technology. The movement is also academically driven by the perceived need to produce independent and life long learners. Review and redesign of the undergraduate and postgraduate curricula have been undertaken with the following results:

- Reduction in the traditional class contact time for students.
• Elimination of subjects and courses, which are non-viable in financial terms and according to class size considerations.

• Provision of improved learning resources to the students (e.g. learning guides, delivering academic material through the use of IT, etc.).

The major advantage of this option is that it allows the School to move into the 21st century and compete with other Nursing schools, not only locally but nationally and internationally, due to the increasing delivery of academic programs through Internet and the like. The major disadvantage of such reform, particularly in respect of the development of new and innovative learning materials, is that in the short term it requires additional resources in terms of staff time and the like to produce the material. On the other hand, redesign of the courses has the added advantage of providing a vehicle for team building and a shared vision.

**Seek Review Of The University’s Funding Model**

An argument could be made that the existing relative funding model is inequitable and no longer has currency. To seek review of the existing funding model, the School would need to convince the University that its current RFM weighting of 1.6 for under-graduate programs, 2 for post-graduate research programs and 1.8 for other post-graduate programs is insufficient, given the relatively high contact hours and clinical practicum requirements. Although this option appears attractive, its success is unlikely. The RFM is underpinned by three national studies commissioned by Canberra. DETYA is currently sponsoring the development of activity-based costing in higher education, however, this will not yield any useful figures for 12 to 18 months, and no comprehensive external data is currently available to update the RFM. Such a suggestion may also be seen as simply “robbing Peter to pay Paul” and transferring one School’s problem to another. Nevertheless, it is believed that the School
can, in the longer term, bring about a change in the University’s funding model, were it to adopt some innovative practices internally in terms of funding of its own constituent units, as discussed below.

**Revise the Internal Funding Model for the School**

Under this scenario the existing funding model utilised within the School could be reformed in such a way as to serve as a best practice for the University as a whole. It is believed that the RFM is too largely dependent on input measures such as student load, rather than output or outcomes measures, including the perceived quality of teaching and learning. The Federal Government has been encouraging universities to move towards performance-based funding. Such an approach has been introduced in terms of the University’s research funding; we now need to adapt this method to the funding of the University’s teaching and learning. This is a very large topic on its own; however, it could function as follows:

- The School could develop teaching and learning key performance indicators to be used for funding purposes. Preliminary work has commenced in this area.

- The School would then determine what proportion of funding be allocated, on the basis of each of the agreed KPIs.

- The KPIs would then be applied to fund the sub-sections of the School.

Another aspect of the School-funding model, which may need to be considered, is the allocation of funds to individual subjects or units of the School. Under this scenario, particular academics would be made responsible financially for the running of each subject and balancing the budget for that subject. The major advantage of such an approach is that it would allow the School management team to monitor budget results at the subject level. The major disadvantage of such an approach is that it
could result in atomisation of the budget and, due to chance factors having greater impact on a small area such as a subject or unit, result in large stochastic variations in outcome, due to the difficulty in controlling such factors. Nevertheless, an academic within the School is now responsible for controlling the large clinical budget.

**Improve SGR in the School**

A more innovative approach to the current issues facing the School would be to make the cake larger, rather than slicing an ever-decreasing cake. This will require the School to develop programs, which generate income for the School. The following are examples of such approaches:

- Increase the number of full fee paying overseas students admitted to the programs being taught by the School of Nursing. At the same time, ensure that the School receives an equitable share of the profits/funds.

- Develop more short courses which are fee paying within the School.

- Incrementally over-enrol on the DETYA funded student load and collect the above base funding from DETYA for such students. A note of caution however, is warranted, as marginal funding does not recover the total costs, including the high outlays for service teaching and clinical practice.

- Obtain industry sponsorship for the programs. This will be difficult, given the relatively low status of Nursing.

- Encourage academic staff to undertake consultancies, which generate income for the School.
• Provide Nursing services on a cost recovery basis to the University and external clients.

This final option must be given very serious consideration. The SGR within the School has grown substantially. However, such measures will need to be implemented concurrently with strategies to increase academic administrative support and reduce class contact hours and assessment tasks.
Planning Policy Parameters

The School may find it helpful to develop some resource policy parameters as follows:

It is important that there is a balance between salary and non-salary costs. Many Universities have a policy that at least 20% of the operating expenditures must be on non-salary costs, to ensure that a balance is maintained and funds are available for equipment and staff development costs. Under this scenario in the short term the non-salary (recurrent) expenditure will be increased at least to the extent of the 1999 surplus.

Review of School Funding Model

In order to limit the perturbations of the introduction of a new funding model, it is suggested that initially a high proportion of the model will allocate funding on the existing basis, namely, using the weighted EFTSU. This figure could, in the first instance, be as high as 95% but over a period of time be decreased or even completely phased out. The other component of the model, say 5% of total operating grants, could be subject to Performance Based Funding.

Before Performance Based Funding can be introduced in the school, it needs to determine which key performance indicators can best be applied to its mission including teaching and learning and research KPI's. Regarding the latter, the following measures may prove useful:

- Weighted research grants attracted by the disciplines (use DETYA weightings).
- Publications recognised by DETYA in terms of the research quantum.
• Number of higher degree research course completions.

• The number of active researchers being defined as new appointments over the past 3 years at Levels B and C and with at least doctorate level qualifications and other academic staff with at least one DETYA recognised publication over the previous 12 month period.

It should be noted that the school currently does not have a strong research culture and considerable efforts should be devoted to staff development. A carefully planned approach to ensure appropriate resource allocation and a balance between teaching and research within the School is necessary, as suggested by Beverland and Bretherton (1998).

It is important that teaching and learning indicators are outcomes oriented rather than simply considering inputs. For example, although it is important that good quality students are attracted within the school, enter scores are input measures which ideally should not be used in Performance Based Funding. If this premise is accepted, the school may wish to consider the following output or outcome based measures in terms of the Performance Based Funding component of the model:

• Student progress rate.

• Retention rate.

• Graduate employability.

• Scores on the CEQ scale, particularly, good teaching.
Before any funding model can be implemented internally within the School, it will need to be agreed as to which level the resources should be devolved. It could be a grouping of similar subjects, courses etc.

**Self Generated Revenue (SGR)**

It is important that the school and indeed the faculty in the University provide incentives for academic management units to generate more privately based income. As previously explained, the Government has decreased its funding of Universities and the only way these institutions will prosper and survive in the future is through greater self-generated revenue. Incentives for generating such revenue provided by the school and indeed by the University could be as follows:

- Based on past performance, a base self-generated revenue target should be set for the discipline or management unit concerned. This base amount should be placed in “the hopper” and distributed on the basis of the existing funding model. The target figure should not be so low that there is no incentive to increase such income. However, it shouldn’t be too high either otherwise the task becomes an impossible one.

- If a management unit generates above base revenue then they should be able to keep most of the monies so generated. This means that only marginal deduction should be made for central services costs, faculty costs and, if applicable, school costs. At one university this marginal rate has been set at $\frac{1}{3}$ of the normal rate (approximately $1000 per EFTSU). By passing on most of the money to the areas which generate the income and which teach the students, greater incentives will be provided for SGR.

**CONCLUSION**

This higher education nursing case study represents a microcosm of resource planning pressures facing a number of disciplines in many Australian universities. As such, it is an important example of
the adaptation by an academic organisational unit to an externally induced resource crisis in higher education. The simplistic economic rationalist approach currently adapted at the Federal Government level, that academic productivity can be increased ad infinitum and that any gap in funding can be made up with an exhaustive supply of smart and rich fee paying students, is having a devastating effect on university disciplines such as nursing.

The government funding cuts are not trivial either. For instance, the AVCC has estimated that, excluding HECS amounts paid by students or parents, the extent of government withdrawal of funding from the higher education system is “around a massive $1070 per student” (AVCC, 1998) over three years to 2001. Further, the lack of Federal Government salary supplementation, in an environment with around 13% salary increase between 2000 and 2002, means that such increases are largely funded in most disciplines by decreasing staff numbers or increasing SSR. With fewer staff teaching even greater numbers of students than before, the quality of teaching can only decline, despite the establishment of a national quality agency and government rhetoric. Quality in learning and teaching strategies must be adequately resourced to generate acceptable outcomes for students as learners.

Yet another difficulty for disciplines such as nursing is the limited opportunity to engage in self-generated revenue in order to offset the negative effects of declining government funding. This means greater wisdom is required by university managers in internal funding of faculties and schools. It may be that disciplines such as IT and Business, that have the capacity to generate substantial non government income, should be allocated less government funds than others, who must rely more on the public purse.

Given the current worldwide critical nursing shortage, it can be argued that the education of professional nurses is an essential public benefit. The private benefits to graduates are relatively low given the modest salaries paid to nurses in comparison to other professions (for instance, the latest
available 1998 GCCA survey results, indicate that teachers’ starting median salaries are over 8% greater than that of nurses).

If higher education is to meet the needs of the Australian community for the next twenty years, careful consideration must be given to appropriate government funding. The move towards a performance based funding model has provided the impetus for change; a review of old practice, the incentive to evaluate and improve teaching and learning, the imperative to develop and sustain a research culture and the need to generate revenue. However, these changes should not come at the expense of adequate staff/student ratios, quality teaching and appropriately funded resources. If we are to attract young people into essential services such as Nursing, their education must be a well-resourced and attractive alternative to disciplines such as Business, Law and the like.
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ENDNOTES

1 A Faculty Student Centre has been established to undertake centralised student administrative functions, which were previously handled by the School.

2 Unfortunately, there has been no update of these studies since 1990.

3 Ross, (1998) outlines some of the issues that need to be considered prior to implementation of such a model.

4 Information Technology, Business and Medicine may be exceptions.
REFERENCES


