

Subject	Maintaining Quality within the Institution
Module	The Quality Cycle: Evaluating and Improving
Topic	3.5 Improving

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Please note that this is a text-only version. All links and animations are not activated in this version. It is recommended that you view the topic online for an interactive learning experience.

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1. Introduction



From an institutional perspective, the major imperative for activity in the quality area is to effect improvement. Even the other major consideration (that of inspection by national quality agencies) is partly geared to this as such agencies focus not only on the demonstration of adequate quality assurance systems but also on continuous institutional improvement. It is therefore important for institutions to have in place robust mechanisms for improvement and to be able to demonstrate improvement.

This topic considers the demonstration of time series improvement as a consequence of quality assurance and improvement activities. It also considers the improvement by Operational Area (e.g. University, Faculty, Department, and Centre) and institutional KPIs including data, time series and setting targets.

Objectives: Improving

Upon completion of this topic, you should be able to

- Identify the systematic approach to institutional improvement

2. Improving

A continuing theme throughout each module has been the need for accountability with regard to quality and this is paramount if institutional improvement is to be demonstrated. Considerable attention was given to the ascription of accountability and responsibility with regard to Review activities. Perhaps the best Improvement reporting arising from reviews of all kinds (e.g. from the action plan arising from a national quality agency audit, from an institutional self-review, a faculty, department, thematic, campus or any the of reviews considered earlier in this module) is that all aspects of the review action plan were implemented. It is, of course, expected that such actions will be for the benefit of the institution but as such actions are ad hoc and located at varying parts and levels of the institution, it is not immediately obvious that even by implementing every recommendation of every review, it would be possible to explicitly demonstrate institutional improvement. A more systematic approach to improvement is required.

a. Institutional KPI (RAG) Reports

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Many institutions have developed a set of Key Performance Indicators (KPIs) through which they inform themselves and their governing councils of progress against key variables, often illustrated by red, amber, green or RAG status. There are issues with institutional KPIs as they relate to data collected concerning the past and so the variables are often described as 'lagging' or 'lag' indicators. Higher education institutions work, for the most part, on a yearly cycle and when data for KPIs is also collected by a government for all institutions, and where the data has to be collected from each institution, re-calibrated and sifted (as for the Course Experience Questionnaire in Australia) or refers to a defined historical period (as for research quality exercises everywhere), the actual data being presented to a council each year can refer to activities undertaken every 3 or so years previously. The issue for governing councils is then knowing how the institution is performing now, or how it performed last year, especially if institutional KPIs will be used to determine Senior Executive performance bonuses, as is often the case. Notwithstanding the issues there are with institutional KPIs, the move to adopt them has ushered in greater transparency and accountability with regard to institutional performance.

Part of the power of reporting institutional Improvement through KPIs is also in the ability to provide comparative information of performance against the whole sector (e.g. average for all institutions, top/bottom 10% etc) or against groupings within the sector (for example, Australian Universities can report against such groupings as the Group of Eight, the Australian Technological Universities or the Innovative Research Universities Australia). It also sets the scene for not only reporting passively against whole sector or sub-group performance but for actively setting targets concerning desired performance in the future. To have all of this available in a snapshot which is colour-coded into RAG traffic light indications of performance and position according to comparator institutions and which provides targets for achievement over the years ahead – all in a two pages – is a powerful tool for reporting performance Improvement.

The following four diagrams illustrate the layout of two institutional KPI reports including the kinds of variables considered, RAG colour-coding of performance, comparator groups and targets. All of this information is public domain and in fact a criterion for selecting indicators for institutional KPI reporting is usually that the information has to be openly available, as this makes it much easier to access comparable institution data.

The first two diagrams below illustrate institutional KPI reporting for a large research intensive Australian University.

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Measures ¹	2000	2001	2002	2003	2004	2005	2006	Target (2008)
Reputation								
SJTU Academic Ranking of World Universities				152-200	202-301	203-300	201-300	Top 150 (world)
THES World University Ranking					33	33	36	Top 25 (world)
Newsweek Global University Ranking – new							73	Top 50 (world)
Research								
Share of NCG	8th	7th	7th	8th	7th	6th		Top 3 in GoB
Share of non-NGC	7th	5th	4th	5th	4th	4th		Top 3 in GoB
Share of total research income – new	5th	5th	5th	5th	5th	4th		Top 3 in GoB
Share of weighted publications – new	5th	4th	4th	4th	4th	3rd		Top 3 in GoB
Share of HDR completions	4th	5th	4th	4th	5th			Top 3 in GoB
Share of HDR student load			5th	5th	5th	5th		Top 3 in GoB
Education								
Share of top 5% students			22.7%	25.0%	27.2%	26.5%	33.5%	30.0% (VTAC)
CEQ: Good teaching		7th	7th	6th	6th	6th		Top 3 in GoB
CEQ: Generic skills		5th	6th	6th	6th	6th		Top 3 in GoB
CEQ: Overall satisfaction		5th	7th	6th	6th	7th		Top 3 in GoB
GDS: Employability of graduates		4th	5th	7th	7th	8th		Top 3 in GoB
GDS: Further FT/PT study – new		8th	6th	6th	7th	7th		Top 3 in GoB
Progression rate – new								Top 3 in GoB
Attrition rate – new								Top 3 in GoB
Learning and Teaching Performance Fund						6th		Top 3 in GoB

Measures ¹	2000	2001	2002	2003	2004	2005	2006	Target (2008)
International								
Share of international HDR student load			6th	6th	6th	6th		Top 3 in GoB
Share of international research funding – new	6th	6th	6th	6th	6th			Top 3 in GoB
Equity								
Access for students with low SES		3rd	4th	4th	3rd	3rd		Top 3 in GoB
Access for indigenous students		7th	7th	7th	8th	8th		Top 3 in GoB
Women in senior positions		4th	4th	3rd	4th	3rd		Top 3 in GoB
Environment								
Energy consumption – new		5th	7th	5th	7th	7th		Top 5 in GoB
Advancement								
Share of donations and bequests – new					4th	4th		Top 3 in GoB
Share of non-DEST domestic student load – new			3rd	3rd	3rd	4th		Top 3 in GoB
Share of international student load			1st	1st	1st	1st		Top 3 in GoB
Finance								
Profit margin		3.10	2.95	3.30	4.64	4.63		3.0% – 5.0%
Liquidity Ratio (DEST Current ratio) ²		3.6 (1.2)	2.9 (0.9)	2.0 (0.7)	2.2 (0.5)	2.2 (0.6)		1.5 – 3.0
Debt to equity		8.31	8.71	9.62	16.00	21.64		Under 25.0%

Institutional KPI Reporting

The two diagrams below illustrate a similar approach but this time for a small Regional Australian University. It can be noted that the categories for variables differ somewhat from the first example and the comparator group is this case is a ‘self-constructed’ Regional Comparator Group of similar Universities and referred to as RCG.

Name of indicator	Indicator type / Descriptor	RCG data	2004	2005	2006	2007	2008	2009	Target (2010)
REPUTATION									
Shanghai Jiao Tong	Academic World Ranking band	Yes			401-500	403-510	>500		In top 500
Good Universities Guide	Overall Teaching Satisfaction	Yes	*****	*****	*****	*****	*****	*****	*****
RESEARCH									
Domestic HDR load	Share of RCG load	Yes	16.4%	16.8%	16.2%	15.8%	15.2%		1st/2nd in RCG
All HDR completions	Share of RCG completions	Yes	19.6%	19.5%	21.3%	19.1%	23.8%		1st/2nd in RCG
Research income	Income per staff vs RCG average	Yes	111%	108%	100%	107%	88%		1st/2nd in RCG
Research publications	Number per staff vs RCG average	Yes	93%	100%	110%	110%	110%		1st in RCG
STUDENT EXPERIENCE									
Overall satisfaction	Percentage approval	Yes	80.4%	79.1%	78.6%	76.3%	76.2%	83.4%	1st in RCG
Good teaching	Percentage approval	Yes	60.4%	60.2%	61.4%	60.1%	60.1%	67.7%	1st in RCG
Generic skills	Percentage approval	Yes	66.2%	67.6%	71.0%	71.5%	71.3%	76.9%	1st in RCG
Student Staff ratio	Armidale Student EFTSL / Staff	Yes	20.2	19.8	19.5	19.6	20.2		1st/2nd in RCG
Progression	Units passed as fraction	Yes	80.2%	82.5%	81.6%	80.1%	79.5%		>83.0%
Retention	Students proceeding/graduating	Yes	73.4%	73.5%	74.1%	74.6%	NY		>78.0%
GRADUATE OUTCOMES									
Full-time employment	Percentage of those available	Yes	84.3%	81.5%	82.1%	81.4%	81.8%	84.5%	3rd in RCG
Further study	Percentage	Yes	27.0%	23.5%	24.6%	23.4%	21.6%	24.0%	3rd in RCG
SOCIAL INCLUSION									
Indigenous students	Participation rate	Yes	1.8%	1.6%	1.6%	1.7%	1.4%		2nd in RCG
Regional participation	Participation rate	Yes	45.2%	45.0%	46.0%	46.3%	45.9%		2nd in RCG
Isolated participation	Participation rate	Yes	2.7%	2.9%	2.6%	2.3%	2.1%		2nd in RCG
Low SES participation	Participation rate	Yes	21.3%	21.2%	22.0%	21.2%	20.8%		3rd in RCG
INTERNATIONAL									
HDR students	Share of RCG load	Yes	16.9%	14.3%	17.6%	16.1%	13.3%		>=3rd
Coursework students	Share of RCG load	Yes	5.1%	4.7%	5.3%	4.3%	3.3%		>=4th
Overall satisfaction	Percentage approval	Yes	81.0%	70.9%	78.2%	77.7%	73.6%		1st in RCG
Good teaching	Percentage approval	Yes	69.2%	60.7%	64.8%	61.1%	61.8%		1st in RCG
Generic skills	Percentage approval	Yes	69.6%	72.7%	71.8%	71.5%	71.3%		1st in RCG
Full-time employment	Percentage of those available	Yes	89.0%	88.7%	78.9%	70.3%	60.7%		>=3rd
STAFF									
Staff satisfaction	Average "passion and progress"	NA					62%		>80%
Academic staff age profile	Percent over 55 years	Yes	27%	26%	30%	33%	35%	35.4%	4th (2015)
FINANCIAL									
Operating Margin	Financial diagnostic ratio	Yes	2.2%	4.1%	2.1%	1.8%	2.1%	4.3%	>3.0%
Current Ratio	Financial diagnostic ratio	Yes	1.62	1.60	1.31	1.31	1.24	1.47	1.47
Borrowings to Equity	Financial diagnostic ratio	Yes	3.4%	2.2%	1.5%	0.4%	0.4%	0.4%	<1%
CAPITAL ASSETS									
Strategic asset management	Benchmarked assessment score	Yes	38	42	44	51	42		1st in RCG
Space management	Benchmarked assessment score	Yes	33	44	61	81	81		1st in RCG
Building operating cost	\$/m2	Yes	538	542	548	549	557		1st/2nd in RCG
SUSTAINABILITY									
Energy per m2	GJ per m2	Yes	0.77	0.69	0.66	0.78	0.64		2nd in RCG
Carbon emissions	Kg CO2-e/m2GFA	Yes					103		1st in RCG
Water consumption	kl/m2	Yes	0.84	0.92	1.06	1.24	0.92		3rd/4th in RCG
Sustainable development	Benchmarked assessment score	Yes	61	55	57	70	80		1st in RCG

Legend

Number in cell is UNE data for year >>

<< Colours show position in RCG

1st or 2nd 3rd or 4th 5th or 6th Not yet available Muted colours in 2008 are probable position (RCG info not available)

Institutional KPI for Small Regional Australian University

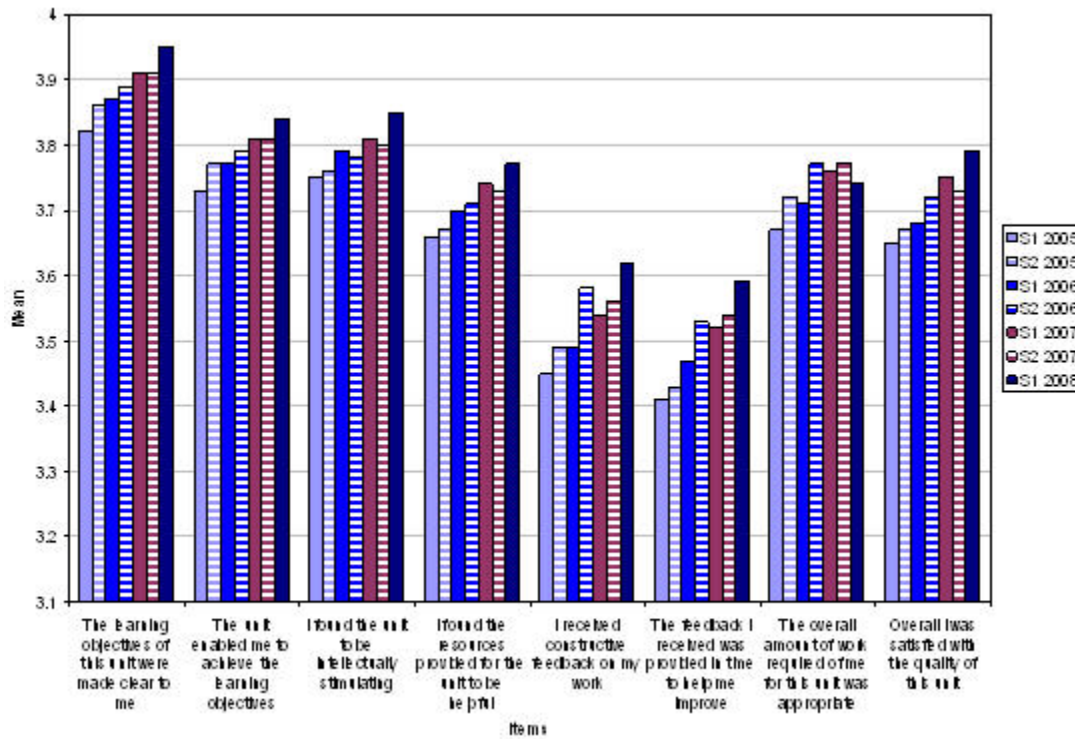
b. Single Variable Improvement

Student Evaluation of Units

An example of single variable improvement discussed earlier is that of student evaluation of units. Extensive research discourse over the past 40 years points to the overall validity and reliability of well-conceived surveys of student opinion and the

correlation between positive student ratings and improved learning outcomes, contrary to ill-informed opinion (see the Marsh and Roche's reference above). Demonstration of improvement across an institution in student evaluation is therefore a powerful piece of evidence in its own right.

The diagram below illustrates such improvement in a large Australian university over a three and a half years or 7 semester period (S1, S2 refers to Semester 1 and 2 in each year).



Demonstration of Improvement in a Large Australian University

Some of the major points to note from this data are improvements in performance across the board, especially in the final 'Overall Satisfaction' item. Performance was lowest in the two assessment items: "I received constructive feedback on my work" and "the feedback I received was provided in time to help me improve" – which has been a consistent finding in student surveys at all levels and in all contexts (e.g. unit, course, current student, graduated student, by faculty, campus, mode, institution and country). For further details on key to improvement, click the following link.



[Key to Improvement](#)

Key to Improvement

Key to Improvement is systematic management of the process with the major aspects of this being:

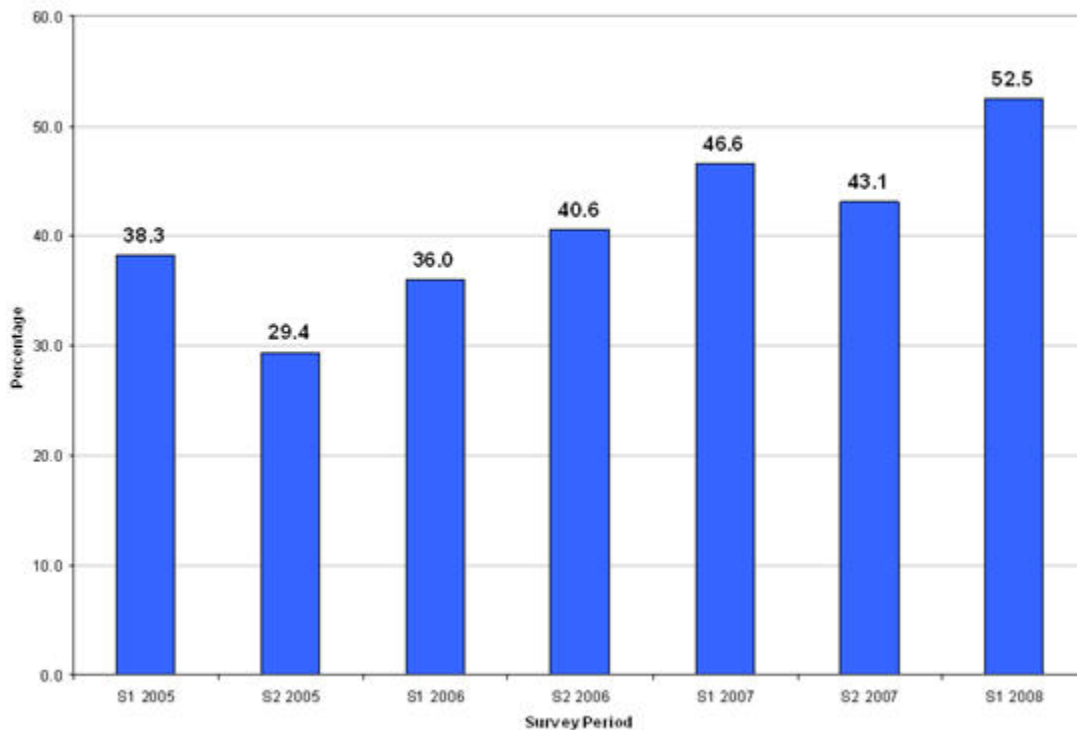
- a single student evaluation system to allow comparison across all elements of

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- the institution;
- evaluations taken regularly (e.g. every time the unit is offered);
 - stability of items and processes over time in order to allow time series comparisons;
 - transparency with all data being open to viewing including by interested parties such as colleagues, students and parents;
 - recognition of highly performing units (e.g. letters and ceremonies of commendation);
 - rigorous follow up of all areas of concern noting that the concern may or may not have anything to do with the quality of teaching, but whatever the cause it will be followed up and an action plan developed for sign-off at a high level;
 - that the action plan is based on the open-ended comments of students rather than the self-interested theories of staff;
 - accountability through line management by unit coordinators, Heads of Department, Deans to the Executive level (e.g. Deputy Vice-Chancellor Academic).

Transparency, consistency, persistence and accountability are the major factors in making any quality system work and in order to be able to demonstrate institutional improvement.

Finally, it is often stated that this kind of student evaluation system leads to ‘survey fatigue’ on the part of students. In fact, the evidence is to the contrary – where there is a system that works and leads to the improvement of units, which can easily and openly be seen by students, participation rates actually increase. For example, during the same period of institutional improvement in student evaluation of units illustrated above, percentage participation rates for the mainly web-based unit evaluation process (every unit evaluated every offering) were as follows.

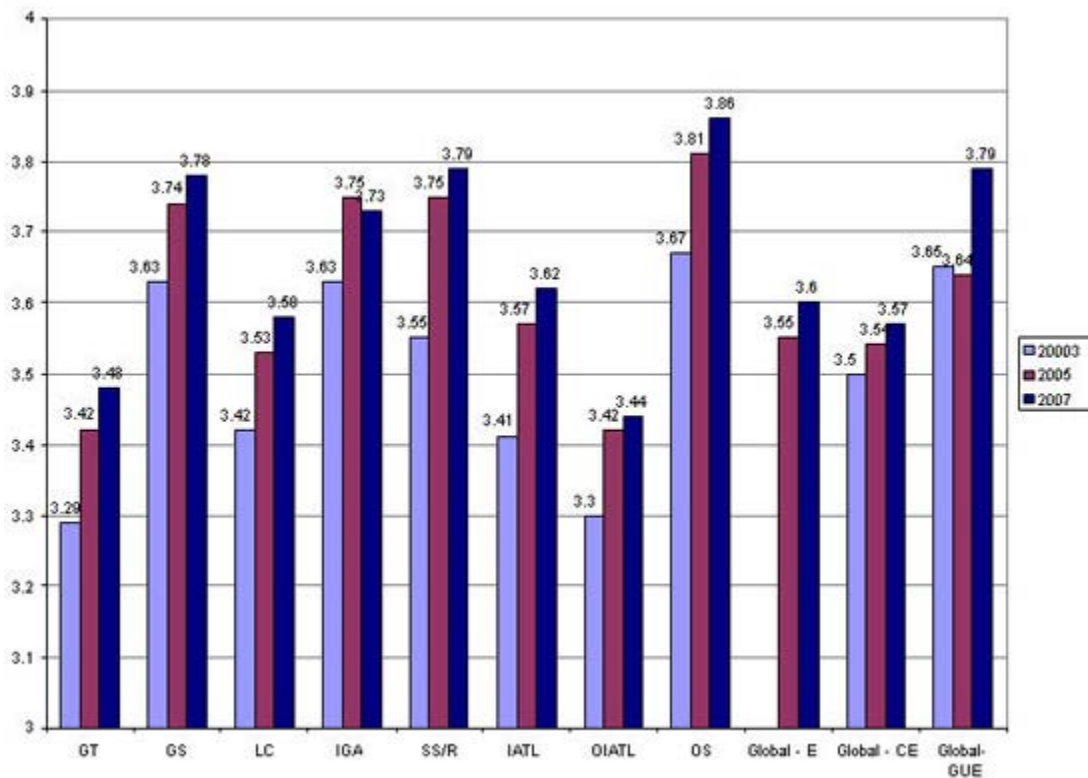


Participation Rates for Web-based Unit Evaluation

Student Evaluation of Courses:

Taken up a level to the evaluation by students of their courses (or programs) and including support services, similarly compelling time series data may be developed given a similar approach to the management of the process. For example, taken every two years over three cycles, a large and systematic evaluation of all courses and support services by a large Australian university produced the results below, where the various scales and items of the survey were as follows:

- GT: Good Teaching Scale (from the Course Experience Questionnaire);
- GS: Generic Skills Scale (from the Course Experience Questionnaire);
- LC: Learning Community Scale (specially developed);
- GA: Institutional Graduate Attributes Scale (specially developed);
- SS/R: Student Support and Resources Scale (specially developed)
- IATL: Institutional Approach to Teaching and Learning (specially developed);
- OIATL: Other Important Aspects of Teaching and Learning (not covered in other scales and specially developed);
- OS: Overall Satisfaction Item (from the Course Experience Questionnaire);
- Global: Meeting student Expectations (various Scales specially developed).



Results from Student Evaluation of Courses

c. Unit Monitoring

As outlined in the section on Unit Monitoring above, unit monitoring expands on single variable monitoring to include a number of important measures. All of the points made regarding the importance of managing the process properly in terms of

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transparency, consistency, persistence and accountability still pertain. It is also important to keep the metrics simple, given the complexity of more measures. All management decision making is to an extent arbitrary but decisions still need to be made. In terms of identifying units that require an action plan and which will be tracked for improvement in the next period, some common measures and parameters may be as follows:

- retention less than 80%;
- overall student satisfaction item score less than 3.0 (on a 5 point Likert scale);
- response rates for unit evaluation less than 40%;
- enrolments less than 5*;
- financial margin less than x (when financial margin is available).

Similarly, units to receive a commendation may have:

- retention more than 90%;
- overall student satisfaction item score 4.0 or more (on a 5 point Likert scale);
- response rate for unit evaluation 40% or more;
- enrolment more than 5*;
- financial margin more than x (when financial margin is available).

* Small class size may be connected to Honours or Masters units and such units may also be viable when they are utilised by multiple courses, e.g. Certificate; Diploma; Degree A; Degree B etc. Identified large class Units may subsidise small class size units where this is transparent and agreed. Because most governments fund different types of course at different rates, having an arbitrary cut-off for small courses (e.g. 5 or less) is not as effective as basing this on financial margin data, but an issue is that not all institutions are able to ascribe financial margin accurately by unit or by course.

Improvement on these variables across an institution is often fairly small and incremental, but nonetheless powerful in terms of demonstrating that quality management of the area is producing the outcomes and moving the institution in the desired direction. An example of such reporting on two years of Unit Monitoring at a small, regional Australian University is as follows:

- number of units offered by mode decreased from 1,312 to 1,271;
- number of small enrolment units (modes of units with an enrolment of 5 or less) decreased from 438 to 387;
- number of poorly performing units requiring action plans decreased from 10 to 9;
- number of low overall satisfaction units (modes of units with overall satisfaction less than 3) decreased from 54 to 51;
- average attrition rate decreased from 8.45% to 7.52%;
- average enrolment per unit by mode increased from 26.48 to 27.95;
- average overall satisfaction increased from 3.91 to 3.97.

The last word on institutional Improvement concerns communication. The time series evidence outlined above should be of the highest value for national quality audit agencies and once every 5 years or so there is the opportunity for it to be celebrated within and beyond the organisation in association with external audit. That is insufficient, however, and there is a need for a communication strategy to bring to all stakeholders, internal and external, the time series trends as they develop in each reporting period, and irrespective of whether they are good or bad.

3. Discussion

Discussion: Improving

Consider the following key questions regarding Improvement at your own (or choose one) institution:

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- What data concerning institutional improvement is available?
- Who has responsibility for ensuring that Improvement is demonstrated? What Committees have responsibilities for considering Improvement reports?
- What data that is not available presently, would you like to see being available concerning Improving?

4. Summary

This topic covered the following main points:

- Key to Improvement is systematic management of the process with the major aspects of this being:
 - a single student evaluation system to allow comparison across all elements of the institution;
 - evaluations taken regularly (e.g. every time the unit is offered);
 - stability of items and processes over time in order to allow time series comparisons;
 - transparency with all data being open to viewing including by interested parties such as colleagues, students and parents;
 - recognition of highly performing units (e.g. letters and ceremonies of commendation);
 - rigorous follow up of all areas of concern noting that the concern may or may not have anything to do with the quality of teaching, but whatever the cause it will be followed up and an action plan developed for sign-off at a high level;
 - that the action plan is based on the open-ended comments of students rather than the self-interested theories of staff;
 - accountability through line management by unit coordinators, Heads of Department, Deans to the Executive level (e.g. Deputy Vice-Chancellor Academic).