A Consideration of Quality, Standards and Compliance

Murdoch University

Dr. C. A. Creagh, Dr. D. Parlevliet, Dr. G. E. Lee
What is Quality?

- Quality – degree or standard of excellence
  - Units of quality? Difficult to determine the degree!
- Standard (1) – an accepted example of something against which others are judged or measured
- Standard (2) – a level of excellence or quality (high/poor standard of work)
- Standard (3) – of a usual, medium, or accepted kind (a standard amount)
- Qualified – having the abilities, qualities, or attributes necessary to perform a particular job or task (minimum standard)
- Quality control – control of the relative quality of a manufactured product, usually by testing samples [against a set of criteria] (minimum standard)

The definitions on this page come from the Collins Australian Pocket Dictionary 1992 by HarperCollins Sydney
A Personal Attempt at Assessment of Quality: Lab Reports

• Your lab report will be marked using the following marking key:
  – **NGE** - not good enough - has handed in an unsatisfactory report and needs to do it again - your tutor will set a deadline.
  – **Pass** - doing the basic minimum as set out in the requirements
  – **Credit** - some indication of thinking OR attention to detail
  – **Distinction** - 2 out of 3 - indication of thinking, attention to detail, analysis of data (what do the results mean?) analysis of errors (are the results significant?)
  – **High Distinction** – indication of thinking, attention to detail, analysis of data and errors

• **It is important to get feedback on how you can improve your report write up.**

• Presentation is important. A lab report is a form of communication in the area of science and so it has to get the important messages across.
Scientific Report

Report a real-world observation you have made and your explanation of the underlying physics.

<table>
<thead>
<tr>
<th>Novice</th>
<th>Expert</th>
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<tr>
<td>Content forms isolated pieces of information that need memorising.</td>
<td>There is a coherent structure to the content where relationships are clearly seen and pulled together under overarching concepts.</td>
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<td>Mental models are used but they are treated as though they are reality and there is no understanding of their limitations.</td>
<td>Mental models are used to help with understand and the realisation that a model is being used is retained. The limitations of those models are clearly understood.</td>
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<td>Knowledge in the discipline is fixed and handed down from some expert higher authority – lecturer, tutor, textbook.</td>
<td>The knowledge in the discipline describes nature, is discovered by observation and established by experiment.</td>
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<td>Problem solving is approached by recognising patterns and memorising recipes for finding solutions.</td>
<td>There is a systematic approach to problem solving which includes self checking, sense making and reflection upon the topic.</td>
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Seminar Science Education in the 21st Century: Using the methods of science to teach science. Presenter Carl Wieman 7th December 2009 at the University Club UWA
Scientific Report

• Investigate and Explain the Underlying Physics of an Observed Real-world Situation
  – Observation
  – Link observations to prior understanding
  – Do some tests / collect some detailed information
  – Analyse the information
  – Reflect on the process

• Write a Scientific Report

• Evaluate the quality of your work
Evaluate the Quality of Your Work

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<tr>
<th>Report Content</th>
<th>Well done</th>
<th>Ok</th>
<th>Not Well Done</th>
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University Definition of Grades

High Distinction (HD)
• Exceptional performance indicating complete and comprehensive understanding of the subject matter; genuine mastery of relevant skills; demonstration of an extremely high level of interpretative and analytical ability and intellectual initiative; and achievement of all major and minor objectives of the unit.

Distinction (D)
• Excellent performance indicating a very high level of understanding of the subject matter; development of relevant skills to a very high level; demonstration of a very high level of interpretive and analytical ability and intellectual initiative; and achievement of all major and minor objectives of the unit.
AIP Accreditation

In examining the course for accreditation purposes, the accreditation panel considered the following factors:

- The general academic practices and standards of education at the institution.
- The objectives of the course and the methods adopted to achieve these objectives.
- The standards of admission to the course.
- The duration of the course.
- The breadth, depth and balance in the subjects involved and the intellectual effort and demands of the course.
- The extent and range of methods of assessment of student progress.
- The arrangements for practical training and experience as part of the course.
- The teaching staff conducting the course, their numbers, professional qualifications, experience and educational expertise.
- The accommodation and facilities available including equipment, libraries, laboratories, workshops etc.
- Previous examination papers and student responses.
- Examples of student laboratory notebooks.
- Examples of other written work submitted for appraisal by students.
- Evidence of a review and quality improvement process
If you can't say what Quality is, how do you know what it is, or how do you know that it even exists?

If no one knows what it is, then for all practical purposes it doesn't exist at all.

But for all practical purposes it really does exist. What else are the grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better than others -- but what's the "betterness"?
Situation Dependant

- Personal values, exposure and experience
- Education level dependent
- By getting his students to judge one piece of writing against another Phaedrus was able to convince them that even though they could not define quality they knew what it was, and he was able to show them how to improve the quality of their own work.
Phaedrus

• “He singled out aspects of Quality such as unity, vividness, authority, economy, sensitivity, clarity, emphasis, flow, suspense, brilliance, precision, proportion, depth and so on; kept each of these as poorly defined as Quality itself, but demonstrated them by the same class reading techniques.” (Pirsig 1974).

• This is what we would now consider an example of “best practice” in teaching and learning.

• As far as Phaedrus was concerned, “The whole Quality concept was beautiful. It worked. It was that mysterious, individual, internal goal of each creative person” (Pirsig 1974).
Tertiary Education Quality and Standards Agency (TESQA)

• Don’t say much about quality but they do say a lot about standards.

• Has the difficulty of defining good quality caused a move to the setting of standards?

• Underlying assumption
  – If enough of the basic standards are met, the whole will be greater than the sum of the parts
  – By meeting the basic standards there will come good quality.
TEQSA’s regulatory role is concerned with agreed minimum levels within the standards framework...
The emerging focus upon standards as central to quality assurance signals a shift in emphasis for Australian higher education.

Previously, approaches to quality have principally been conceived as ‘fitness for purpose’, and quality assurance has involved investigating the alignment between the established goals of an institution and the policies and processes in place for achieving these goals.

Quality assurance, when framed in these terms, operates largely around internal reference points.

In contrast, the concept of standards implies a greater emphasis on agreed, external points of reference in measuring and improving quality...
DEVELOPING A FRAMEWORK FOR TEACHING AND LEARNING STANDARDS IN AUSTRALIAN HIGHER EDUCATION AND THE ROLE OF TEQSA, MARCH 2011, discussion paper

• TEQSA is developing learning standards because there is consensus that Australia must be confident that all graduates meet national minimum levels of attainment appropriate for the field or discipline in which they have studied, and appropriate for the level of the award they are granted.
TEQSA specifies “Higher Education Threshold Standards”

• Not a quest for high quality but a risk management quality assurance process!

• It is important to know what the threshold standards are but they can not be our whole focus.

• We have to aspire to have our students achieve at a higher level than the minimum “threshold standards”.
Required Evidence

• We are going to have to prove that we are meeting the minimum standards all the way up the line from unit coordinator to VC
• We would like to assume that if we provide evidence of high quality work on the part of both staff and students then this will suffice but..
  • We worry that this will turn into a time consuming, evidence collecting, box ticking exercise.
  • We worry that people will start teaching to minimum standards and not extending capable students.
  • We worry that this will rob staff and students of precious time that could be better spent on the pursuit of high quality work.
Evidential Standards?

• The activity of university committees, boards, investigators and arbitrators may highlight the value of good quality but the evidence for the good quality, and high standards, that are achieved within the university are because of the good quality, and high personal standards, of the staff.

• In other words most of them would have done it anyway!
What Evidence to Collect?

• Bulk of the evidence could be collected and stored centrally in the university.
• Research information is already being collected in such archives as IRMA.
• Teaching, a streamlined content management system could blend learning management and course content management by holding not only unit materials, but also, databases of student surveys, ASELL benchmarking, and evidence of educational development.
• Academic’s personal information could be kept in Wikis or electronic portfolios.
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<tr>
<th>Graduate attributes</th>
<th>Students</th>
<th>Academics for teaching</th>
<th>Academics for research</th>
<th>Staff reviews</th>
<th>School reviews</th>
<th>University reviews</th>
<th>Employers</th>
<th>AIP</th>
<th>ALTC &amp; similar bodies</th>
<th>TEQSA</th>
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Table 1 Evidence vs. Stakeholders who might be interested for compliance or accreditation purposes
Key Points

• There is no quantitative measurement of high quality – it comes down to the standards of the person doing the teaching
• TEQSA is setting minimum standards. To enable students to achieve high quality outputs they need to be working at a level above the minimum standards
• If we need to collect indicators of standards and quality, we should be doing it as efficiently as possible
References

• AIP. (2008). *Accreditation Report for Murdoch University October 2008* (pp. 1). Perth. This is the report that the AIP gave to Murdoch University at the end of the accreditation process for the Physics degree. A similar criteria list was given to the school in a generic letter before the accreditation process took place and then it was modified by the accreditation panel to best reflect their activity during the accreditation process.


Thank you for listening to our rant!