The University of Sydney

The MASUS Procedure: Measuring the Academic Skills of University Students A Diagnostic Assessment

Revised Edition 2007

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- The Department of Pharmacy, Faculty of Science
- The Department of Accounting, Faculty of Economics
- The Department of Physics, Faculty of Science
- The Faculty of Architecture
- The Faculty of Education
- The School of Electrical Engineering, Faculty of Engineering
- The Faculty of Law
- Sydney Conservatorium of Music
- Sydney College of the Arts

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Introduction

This publication is a practical resource designed to assist university teachers in academic departments and learning centres in establishing a literacy profile of their students. The resource kit describes the background and development of a diagnostic assessment procedure to measure students' literacy skills shortly after entry to university and summarises the associated research. It also provides guidelines on the design of the assessment task, and use of the assessment criteria. Four recent case studies are then outlined, illustrating how the procedure was used in three undergraduate cohorts and one postgraduate cohort. Finally, examples of assessment criteria sheets, student texts, and student feedback sheets are included.

1.0 Important Facts about MASUS

1.1 What does it do?

MASUS is a diagnostic assessment instrument designed to measure students' academic literacy. The whole MASUS procedure enables the creation of a literacy profile of a student cohort in terms of a set of specified criteria. This profile gives staff guidance as to where they can most effectively focus their resources in order to develop their students' literacy and generic skills. The procedure also identifies students who are at risk of failing their course because of poor literacy skills, thus enabling support to be made available to them. It has the potential to be integrated into the course curricula and assessment structure, and could be used as framework for individual student literacy profiles.

Another feature of the diagnostic procedure is that individual feedback to students gives each student a picture of how their literacy skills conform to the expectations of their specific discipline at their current level of expertise. This is particularly useful with first year students who bring with them differing experiences and standards of literacy, and in many cases are slow to recognise the expectations of tertiary institutions. Early explicit feedback provided in the context of this diagnostic procedure can result in rapid identification for the student of the strengths and weaknesses of their written communication from a tertiary, discipline-based perspective.

1.2 What does it not do?

This diagnostic procedure was not designed as a screening device. It does not provide a single score for each student which can then be measured as a pass or fail. It was also not designed to be administered on a single occasion by a single individual. For these reasons it will not answer the needs of those seeking a yardstick to assess student literacy achievement.

1.3 Where has it come from?

It was developed as part of the MASUSS (Measuring the Academic Skills of University of Sydney Students) Project (MASUSS Project Reports, 1993 - 1995; Webb and Bonanno, 1994, 1995; Webb, English and Bonanno, 1995). The procedure has been developed for use as an integral part of the University's courses, in response to expressed need from faculty staff. It was originally designed for first year students but has since been adapted to be applied to other undergraduate and postgraduate cohorts.

The definition of literacy adopted as a basis for this diagnostic procedure is that used in a policy document on language and literacy used by DEET (1991) and subsequently adopted by the Academic Board of the University of Sydney in its policy:" Written and oral communication skills of students"

> *Literacy is the ability to read and use written information and to write appropriately in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth and to function effectively in our society... Literacy involves the integration of speaking, listening and critical thinking with reading and writing.*

The development of the literacy criteria was based on analysis of a large corpus of student texts from different disciplines within the theoretical framework of Systemic Functional Linguistics (Halliday, 1995; Martin, 1992), but knowledge of this theory is not necessary in order to use the diagnostic procedure. The original rating sheets assume some expertise in the fields of adult literacy and linguistics, but this package includes versions which have been adapted for the use of teachers from different academic disciplines.

1.4 Why is there a need for a diagnostic procedure?

There has been a growing recognition in tertiary institutions that the most appropriate place for students to develop literacy skills is within the conceptual framework and content of specific disciplines. In many institutions this has resulted in a university-wide policy on communication skills in which faculties take on the responsibility for developing the literacy and generic skills of their students. In order to respond effectively to this challenge, many course coordinators feel the need of a starting point, something which can provide them with a framework to inform and structure their staging of the development of student literacy skills.

1.5 Who can use it?

MASUS was designed to be part of a collaborative process between faculty and Learning Centre staff to identify and develop literacy skills. This process normally involves a great deal of discussion between staff members and implies consensus on valued characteristics of writing and assessment in a particular discipline. Language and learning staff have a key role in facilitating such a process, and can contribute expertise on the nature and development of generic communication skills and on the adaptation of literacy criteria to particular written tasks.

It is therefore useful for

- Staff in departments and faculties who are seeking to integrate the explicit teaching of literacy skills into the subject curriculum, or who are seeking information about the developmental literacy needs of their student cohort.
- Staff in learning centres who can assist subject staff to establish the procedure, standardise the assessment and interpret the results.

2.0 The Diagnostic Task

The design of the diagnostic task is essentially the same in all cohorts - textual, visual and numerical data are supplied as background information on a selected topic reflecting the field of study of the cohort being tested. The task requires students to write a short essay demanding a critical evaluation of the validity of a controversial statement made about the information. (For examples of tasks see Appendix B). The rationale for providing background information is that the task is not a test of knowledge but rather of the ability to think about a given body of knowledge in an analytical and critical way, and the ability to manipulate the resources of language in order to depict this thinking.

The assessment criteria are categorised into four main areas, which represent a spectrum of perspectives on the students' writing, from a macro level to a micro level as follows:

A. Information retrieval and processing of verbal, visual and numerical data - is this accurate and appropriate to the task?
B. Structure and development of text - is this clear and generically appropriate to the task and its context?
C. Control of academic style - does the grammar conform to appropriate patterns of written academic English?
D. Grammatical correctness - is the message communicated without the interference of grammatical errors?

Each criterion is elaborated into sub-criteria with key descriptors, e.g. criterion A, *Information retrieval and processing of verbal, visual and numerical data* is elaborated thus:

- most relevant information is employed
- use of irrelevant information is avoided
- visual and numerical information is interpreted correctly
- visual and numerical information is transferred correctly
- information is integrated with text
- text is free from plagiarism

These descriptors can be modified to suit the level of expertise in literacy assessment of the markers. Each of the criteria is given a rating to represent the degree to which the student's written response demonstrates control of the relevant features. The descriptors are not rated individually but each descriptor is assessed as appropriate or not appropriate to guide the rating given to each criterion. Example rating sheets can be seen in Appendix A.

Rating of student performance on the diagnostic task is on a scale of 4 - 1 for each of the four main criteria. A rating of 4 indicates that no problems or weaknesses are demonstrated in the student's writing for that criterion. A rating of 3 indicates there is some need for development, but any weakness is not expected to interfere with the student's progress. Ratings of 2 and 1 are used as indicators of problems or weaknesses that could obstruct the student's progress, and therefore indicate a need for some intervention. Students receive four separate ratings rather than a single rating, enabling them to identify areas of strength and weakness in their writing. An example of student feedback sheets can be seen in Appendix C.

3.0 The Procedure

A generalised procedure has been developed for establishing the diagnostic task within a field-specific context. The stages of this procedure can be seen in the diagram on p. 10. The procedure involves collaboration between subject staff and language and learning staff over the design of the task - the choice of reading material used for the writing task, how that material will be given to the students, the wording of the question and the venue for the completion of the task.

The first stage of the procedure involves initial discussions between language and learning staff and subject staff in order to reach a consensus on the importance of developing literacy skills, the standard of skills regarded as appropriate for the particular level of expertise in the subject area and the nature of the diagnostic assessment - that is, whether it will be diagnostic and formative or whether it will have a summative component and therefore be counted as part of the student's final assessment grade. The diagnostic task can be incorporated into the curriculum at this stage, and is seen as being more useful and effective if it is one part of a staged sequence of writing tasks, which are built into the course.

The second stage involves decisions about the content and instructions of the task, the allocation of marks to criteria if a summative component is added to the assessment, how, when and where the students will receive input and complete the task, and the nature of the formative feedback to individual students. Also useful at this stage is the production of written answers to the task by both subject staff and language and learning staff to establish the value attached to the different criteria by the subject staff. The responses of non-subject staff will probably better approximate the level of expertise to be expected from first year students. Information about the nature and purpose of the diagnostic procedure is provided for the students well before the date of administration of the task, and explicit instructions about how to prepare for it are given in advance. A booklet is prepared for each student, containing information about the diagnostic procedure, the assessment criteria, the task, and space to write the response. It can also contain background reading material if that is necessary. An example of a task booklet can be seen in Appendix D.

The third, fourth and fifth stages involve the administration of the task and the rating process. Markers need to be familiar with the rating criteria and to establish agreement on what constitutes a good, average and inadequate response for each assessment area. The more example answers available for cross-marking practice, the more likely it is that markers will establish reliable standards. After the administration of the diagnostic task, a meeting of markers approximately halfway into the marking process is helpful not just for standardisation purposes but also for discussion on strategies for handling issues such as plagiarism.

A final stage in the process involves decisions on the department response to the literacy profile of the student cohort. These responses can range from complete redesign of curriculum to the staging of writing workshops in support of assessment tasks. As well as responses to the developmental needs of students, it is appropriate to put in place remedial support for those students who have low ratings in all four assessment areas and are therefore at risk of failure in their subject courses.

It is recommended that the task take place within the first five weeks of first semester when it is being used for first year undergraduate cohorts. This means that the procedure for establishing the task and reaching a consensus on the various issues involved should be set in place beforehand.

3.1 Variations in the Procedure

There is a great deal of flexibility in the whole procedure, in order to accommodate differences in field, topic, specific requirements of subject staff and other contextual constraints such as the timing of the task. Variations may occur such as the venue and timing of the task, modifications to the assessment criteria, the level of training needed by the markers, the degree of standardisation that is desirable and the nature and timing of the feedback to students.

Some possible variations, all of which have been successfully trialled, are listed below.

Input for the diagnostic task

- information (written text, diagrams and numerical data) provided in the task booklet
- a topic covered over several weeks in lectures, tutorials and tutorial readings
- a journal article supported by a lecture
- a single reading discussed in tutorial
- student research in the library
- information on the web accessed by students

Venue for the diagnostic task

- large groups in a lecture slot
- small groups in tutorial time
- large groups in laboratory sessions
- individuals working at home

Variations in target genre

- persuasive essay
- report with recommendations
- case study with problem-solution and rationale
- critical review of a journal article

Variations in raters

- language and learning staff only
- subject tutors + course coordinator
- seminar leaders + course coordinator
- course coordinator (*criterion A*) + language and learning staff (*criterion B C and D*)
- laboratory tutors (*criterion A*) + language and learning staff (*criterion B C and D*)

Variations in rating

- assigning an assessment mark to the diagnostic task
- combining the diagnostic procedure with an existing suitable written assessment task
- assigning a 'participation' mark for diagnostic task submission

Variations in response and follow-up

- developmental support built into a tutorial program, with subject tutors supported by language and learning staff
- diagnostic task and feedback integrated into carefully staged course assessment program
- funding obtained for the development of a writing program integrated into the curriculum
- writing workshops timetabled into the curriculum, jointly taught by subject + language and learning staff, aimed to prepare students for specific assessed tasks

Variations in feedback to students

- individual student feedback sheets incorporating examples of criteria and models of successful writing
- direct feedback from rater(s) in lectures or tutorials, combined with individual student feedback sheets incorporating examples of criteria and models of successful writing
- annotated models of successful student writing on the web

(An example of a student feedback sheet is shown in Appendix C)

Follow-up procedures for students identified as at risk of failure due to inadequate academic literacy skills can also vary, depending on the resources on campus. Students who rate poorly in criterion D, grammatical correctness, can be referred for English language training if such facilities exist on campus. Students can be supported by language and learning centres through individual programs and general workshop programs on academic literacy. Alternatively, special faculty-based support workshops can be designed and taught by language and learning staff.

3.2 Collaborative procedure for establishing literacy diagnostic assessment within the context of specific disciplines

1. Establish the context of literacy skills

To identify:

- the role of literacy in the context of the subject area
- desirable outcomes in terms of course / graduate literacy skills
- required literacy skills for course level
- an early suitable course task for content / literacy assessment
- status of assessment e.g. diagnostic + formative / diagnostic + summative

⇩

2. Set up the literacy assessment task

To determine:

- input for task
- instructions for task
- content /literacy skills required by task model answers
- assessment criteria and allocation of marks
- administration of test
- form of feedback to students

⇩

3. Prepare for rating

To include:

- familiarisation of raters with task and assessment criteria
- application of criteria to example answers
- practice with cross-marking exercises
- exploration of rating problems e.g. reliability, issues of plagiarism

⇩

4. Administer
LITERACY DIAGNOSTIC TASK

⇩

5. Debrief raters

to explore difficulties with rating e.g.

- issues of plagiarism
- difficulties in applying criteria
- standardising of ratings

⇩

6. Respond to student literacy profiles

Possible responses could include

- reflection on curriculum in terms of focus on literacy skills
- integration of explicit development of literacy skills into the curriculum
- reflection on nature and staging of assessment tasks
- monitoring of progress of all students
- establishing support strategies for students identified as needing remedial assistance.

4.0 Outcomes

The literacy diagnostic procedure has useful outcomes for departments:

(a) The procedure provides a literacy profile of the student cohort.

The results of the diagnostic task can be presented in a variety of forms (e.g. charts, numerical data) to provide a picture of the literacy skills of the cohort at a particular stage of development. This enables staff to identify specific areas of strength and weakness in the cohort as a whole, and to use that information to inform curriculum decisions and to help students to reflect on their development as communicators of content.

(b) The procedure identifies students at risk.

Most first-year undergraduate cohorts have a small percentage of students who are at risk of failing their course because of poor written literacy skills. If these students are identified early in the first semester, they can be encouraged to seek help and support before their problems accumulate.

(c) The procedure can be used as a starting point in a systematic process, which aims to integrate the explicit teaching of academic literacy into the course subjects.

As can be seen from the procedure on p. 6, it is possible to respond in a variety of ways to incorporate the development of academic literacy skills into the curriculum. The literacy profile can be used as a basis for planning the staging of assessment tasks, and also for the planning of specific support to encourage the development of the desired skills. Support can be incorporated into existing systems and taught by subject staff, thus demonstrating to students that the development of expertise in content is inextricably linked to the development of skills for communicating that content.

The literacy diagnostic procedure has useful outcomes for individual students:

a) **The procedure gives early formative feedback on the strengths and weaknesses of individual student responses**. The student can therefore use the information about his or her performance in the four ratings as a starting point for development of skills in the rest of the semester.

b) **The nature of the task and the feedback gives the student information on the characteristics of academic writing that are valued in a specific discipline.** This explicit and early information saves the student a great deal of time.

5.0 Use in Postgraduate Cohorts

In 2005 the MASUS procedure was trialled in a cohort of postgraduate students entering a coursework Masters degree. The success of this trial has led to the permanent embedding of the diagnostic task into the assessment criteria of the unit of study. A participation mark is awarded for completing the diagnostic task. Since 2005 the procedure has also been used with postgraduate cohorts in a number of other faculties. Time pressures are paramount in such degrees, and students are often entering an unfamiliar discipline area from an undergraduate degree in another field, so it is not surprising that early feedback on their writing in a non-judgemental context has been very popular with new postgraduate students. Support has taken the form of workshops, both adjunct and in course time, and individual one-on-one sessions with Learning Centre staff. An example of MASUS in a postgraduate cohort is reported in Case Study 4, p. 10.

6.0 Research

In the three stages of the MASUS Project, from 1993 - 1995, research focussed on the need to position the diagnostic procedure in relation to student scores in the New South Wales final secondary school Year 12 examination, the Higher School Certificate (HSC). These early research studies (Webb and Bonanno, 1994a) established a relationship between the form of the HSC English course taken by a student and their ratings in the diagnostic procedure: that is, there was a tendency for there to be less need for literacy intervention the higher the level of HSC English course taken.

More recently, research has investigated relationships between academic literacy skills as measured by the MASUS procedure, academic performance and progress in a university degree program (Holder et al, 1999). The Bachelor of Pharmacy degree was a suitable site for such a longitudinal study, as first year cohorts have been assessed using the MASUS from the beginning of the MASUS Project in 1992-3. The task itself has remained stable and is administered as a timed and supervised exercise in a lecture slot. The study used a sample of students who enrolled in first year from 1992 to 1995 and tracked them through their three-year degree.

The results of this study have significance for all those interested in first year students and their literacy levels. University entrance scores from year 12 were not found to be a good predictor of success when used alone. Student performance in three out of the four MASUS assessment areas was found to be a significant predictor of progression rates through the degree. The fourth assessment area, *A. Use of source material* was not found to be significant. Holder et al put forward several suggestions to account for these results. Variables such as first language, and issues to do with motivation and course expectations could combine with deficits in academic literacy skills to result in lack of success. It is also possible that the curriculum of the degree developed some literacy skills (for example, those involved in Assessment Area A) but not others. As the authors point out, development of literacy skills need to be recognised and addressed within degree programs if literacy assessment is to be taken seriously (Holder et al, 1999, p 27).

In a second study (Jones, Holder and Robinson, 2000a) the communication skills of the 1997 first year cohort of pharmacy students who were admitted to the degree by TER, were assessed to explore the value of multiple selection procedures for admission into Bachelor of Pharmacy. The study used the MASUS instrument, an interview and the STAT (Special Tertiary Admission Test) to assess the inter-relationships between these three measures and first year performance. The STAT results were predictors of interview and MASUS scores, and correlated with both first year Weighted Average Mark (WAM) and subject scores. The TER, however, was not a predictor of the interview or MASUS scores.

A third study by the same authors (Jones, Holder and Robinson, 2000b) investigated associations between course candidature in secondary school and literacy skills, the MASUS ratings of the writing of pharmacy students who had been candidates for each HSC course in the year prior to enrolment were compared with those of students who were not candidates for each course. Results showed that students who undertook the higher levels of HSC courses in science or mathematics, or 2 Unit Contemporary English, which has less focus on formal essay writing than the other English courses, had significantly lower levels of academic writing skills than those students who were not candidates for these courses. On the other hand, students who undertook other English or humanities courses such as Modern and Ancient History, had significantly higher levels. There is now a new HSC syllabus and further research could explore whether this will have any impact on students' preparedness to meet the writing demands of university courses.

7.0 The MASUS Procedure beyond 2000

Since the MASUS Procedure was developed, its use has spread both within University of Sydney, and to other tertiary institutions in Australia and overseas. It has proved able to accommodate a variety of approaches to such aspects as, for example, the nature of the task itself and its target response, the question of follow up support, and the issue of whether to assign a summative assessment mark.

Over the years the input for the task has become much more varied, encompassing such activities as group work, discussion groups and observations in the real world, and the task itself has extended from

the original 'argument' essay to include different types of report, though all have involved an element of argumentation or provision of rationale. Follow-up support has incorporated the use of course support software such as WebCT and Blackboard, and on-line writing development tools.

The diagnostic task was initially devised as formative feedback, without an assessment mark at all. Some faculties have preferred to allocate a mark, as they feel that students then take the exercise more seriously and take more responsibility for using the follow-up support. Another way of recognising the value of the procedure without introducing the concept of pass / fail is to allocate a 'participation mark' for the completion of the task

Faculties have chosen different ways to adapt the MASUS to the requirements and values of their discipline. The diagnostic procedure has demonstrated that it is flexible enough for it to remain relevant for over a decade of change in higher educational institutions.

The case studies that follow have been chosen to illustrate this flexibility. Input for the task need not only be through reading and course information, but can also involve information gathering from real situations, as in the first-year undergraduate courses of Design Architecture and Commercial Transactions. In first-year undergraduate Accounting the input involved understanding a model framework, and in postgraduate Law students had to address issues in a case with a dissenting judgement, and distinguish between legal and emotional responses. Feedback and subsequent support is similarly varied, including posting annotated models via the web on Blackboard and support sessions in the library with a focus on using sources.

7.1 Four Case Studies using MASUS in Undergraduate and Postgraduate Cohorts

1st year COHORT	INPUT FOR TASK	TARGET GENRE	MODE OF ADMINISTRATION	FEEDBACK & FOLLOW-UP
1. Undergraduate **Accounting**	▪ lecture on professional ethics from a visiting lecturer ▪ framework model for case analysis established in previous tutorial	Analytical case report based on an ethical issue with recommended course of action + rationale	A timed and supervised exercise in a lecture slot Assessed by subject tutors trained in ratings by Learning Centre staff Assessment mark: students required to repeat task later in semester if they 'fail'	▪ referrals to LC workshops and web page links to grammar support ▪ use of student texts to illustrate aspects of high-rating responses ▪ annotated models on Blackboard ▪ weekly practice cases in tutorial using analytical framework
2. Undergraduate **Design Architecture**	▪ campus tour with academic staff as guides, looking at architectural styles & open space ▪ library session (group work) with reference searches into history of architectural styles in Australia ▪ information on referencing conventions	2-part report, one part descriptive, one part requiring a position statement and support	A timed and supervised exercise in a lecture slot Assessed by Learning Centre staff No assessment mark	▪ referrals to LC workshops ▪ use of student texts to illustrate aspects of high-rating responses ▪ library sessions to address development in assessment area A
3. Undergraduate **Commercial Transactions**	▪ required reading on the court system ▪ detailed notes on structure and assessment of the assignment ▪ individual court visits arranged by students	Court report containing interpretive & evaluative components based on observation of participant roles, proceedings & outcomes.	Written out of class Shared assessment - subject tutors + Learning Centre staff Assessment mark	▪ referrals to LC workshops ▪ use of student texts to illustrate aspects of high-rating responses ▪ adjunct workshops run by LC to address assessment areas C and D
4. Postgraduate **Law**	▪ Lecture on Judicial Activism from subject academic ▪ Textbook discussion of a specific case to do with 'wrongful birth'. ▪ 3 media articles conferenced in class time.	Persuasive essay requiring a position supported by analysis of issues.	A timed and supervised exercise in a lecture slot. Assessed by Learning Centre staff A small participation mark for submitting the diagnostic task.	▪ referrals to LC workshops and web-based support (WriteSite, Clearer Writing)* ▪ use of student texts and expert legal writing to illustrate aspects of high-rating responses ▪ Course time for a follow up writing workshop ▪ An additional adjunct workshop.

*** http://www.usyd.edu.au/lc/resources**

Bibliography

Australian Department of Employment, Education and Training, *Australia's Language: the Australian Language and Literacy Policy* (companion volume to the policy information paper) Australian Government Printing Service, August 1991, p.9.

Bonanno, H., (2002) Standing the test of time: Revisiting a first year diagnostic procedure. *Proceedings from the 6th Pacific Rim Conference, First Year in Higher Education, University of Canterbury, Christchurch, New Zealand* 8 – 10 July 2002, CD ROM.

Halliday, M.A.K., (1985) *Introduction to Functional Grammar*, London, Edward Arnold.

Holder, G.M., J. Jones, R.A. Robinson and I. Krass (1999) Academic Literacy Skills and Progression Rates amongst Pharmacy Students, *Higher Education Research and Development,* 18 (1) pp 19-30.

Jones, J., (2001) A diagnostic assessment of the academic writing of first year students: the value of collaborative research, *HERDSA News*, 23 (3) pp33-35.

Jones, J., G.M. Holder, R.A. Robinson and I. Krass, (2000a) Selecting Pharmacy Students with Appropriate Communication Skills, *American Journal of Pharmaceutical Education*, 64, pp 68 -73.

Jones, J., G.M. Holder and R.A. Robinson, (2000b) School Subjects and Academic Literacy Skills at University, *Australian Journal of Career Development*, 9 (2) pp 27-31.

Martin, J.R., (1992) *English Text System and Structure*, Amsterdam, John Benjamins.

MASUSS Project Reports (1993-1995), Learning Centre, University of Sydney

Webb C. and H. Bonanno (1994) Systematic Measurement of Students' Academic Literacy Skills, *Research and Development in Higher Education*, 16, pp 577-581.

Webb C. and H. Bonanno, (1995) Assessing the Literacy Skills of an increasingly diverse Student Population, *Research and Development in Higher Education*, 17 (electronic version).

Webb C., L. English and H. Bonanno, (1995) Collaboration in Subject Design: integration of the teaching and assessment of literacy skills into a first-year Accounting course, *Accounting Education*, 4 (4) pp.335-350.

Appendix A:
Examples of Rating Sheets and Criteria

MASUS ASSESSMENT CRITERIA
RATING SHEET (EXPERT LITERACY RATERS)

Cohort Name S.I.D.

KEY TO RATING:

4 = excellent / no problems / accurate / very appropriate
3 = good / minor problems /mainly accurate / largely appropriate
2 = only fair / some problems / often inaccurate / often inappropriate
1 = poor / major problems / inaccurate / inappropriate

A = appropriate
NA = not appropriate

CRITERIA		
A. ***Use of source material*** *- is information retrieval and processing of visual, verbal and numerical data correct and appropriate for the task?*	4 3 2 1	
• most relevant data is employed • use of irrelevant data is avoided • visual and numerical data is interpreted correctly • visual and numerical data is transferred correctly • data is integrated with text • text is free from plagiarism	A	NA
B. ***Structure and development of answer*** *- is the structure and development of the answer clear and generically appropriate to the question and its context?*	4 3 2 1	
▪ genre is appropriate to the task ▪ clear focussed thesis statement ▪ choice of Theme and New reflects structure ▪ critical evaluation of evidence ▪ use of evidence consistent with thesis ▪ statement of conclusion which follows from argument / evaluation and relates to the thesis	A	NA
C. ***Academic writing style*** *- does the grammar conform to the patterns of written academic English appropriate for the task?*	4 3 2 1	
▪ appropriate use of grammatical metaphor and nominal group structure ▪ appropriate use of interpersonal metaphor ▪ demonstrated control of appropriate modality ▪ demonstrated control of cohesive devices - reference chains, textual reference ▪ demonstrated control of taxonomic relations ▪ appropriate choice of lexis	A	NA
D. ***Grammatical correctness*** *- do grammatical errors interfere with communicating the message?*	4 3 2 1	
▪ clause structure follows recognisable and appropriate patterns of English ▪ correct subject/verb agreement ▪ consistent and appropriate tense choice, correctly formed ▪ correct singular / plural noun agreement	A	NA
E. ***Qualities of presentation***	not rated	
▪ spelling generally correct ▪ handwriting legible ▪ paragraphing reflects essay structure	A	NA

MASUS ASSESSMENT CRITERIA
RATING SHEET
(ADAPTED FOR USE BY SUBJECT RATERS AND/OR LITERACY RATERS)

Cohort Name S.I.D

KEY TO RATING:

4 = excellent / no problems / accurate / very appropriate
3 = good / minor problems /mainly accurate / largely appropriate
2 = only fair / some problems / often inaccurate / often inappropriate
1 = poor / major problems / inaccurate / inappropriate

A = appropriate
NA = not appropriate

CRITERIA			
A.	*Use of source material - information retrieval and processing*	4 3	2 1
	◆ relevant information selected ◆ information integrated into the answer ◆ free from plagiarism	A	NA
B.	*Structure and development of answer*	4 3	2 1
	◆ generic structure appropriate to the task ◆ focussed position statement ◆ critical evaluation of evidence ◆ appropriate statement of conclusion	A	NA
C.	*Control of academic writing*	4 3	2 1
	◆ language appropriately abstract and technical ◆ generalisations qualified where appropriate ◆ logical flow of ideas	A	NA
D.	*Grammatical correctness*	4 3	2 1
	◆ accurate sentence structure ◆ correct subject / verb agreement ◆ consistent and appropriate tense choice, correctly formed ◆ correct use of articles	A	NA
E.	*Qualities of presentation*	not rated	
	◆ spelling generally correct ◆ handwriting legible ◆ paragraphing reflects essay structure	A	NA

Appendix B:
Examples of Diagnostic Task

For further details of MASUS procedure for these examples see Case Studies p. 10.

First year undergraduate Accounting, 2002:

(based on a lecture on professional ethics, an analytical framework developed in tutorials, and, with the task, a case study: Educational Service Providers (ESP)

> Using the analytical framework to structure your response, identify the issues, both commercial and ethical, for ESP and the stakeholders involved.
> Recommend a course of action for ESP, with a persuasive rationale.

First year undergraduate Design Architecture, 2005:

(based on a campus tour with academic staff, a library research session, and information on referencing conventions)

> Identify two or three architectural styles present on the main campus of the University of Sydney.
> Do you think that having so many different architectural ideals reflected in the buildings and spaces on the campus gives an unharmonious effect?

First year undergraduate Commercial Transactions, 2004:

(based on course readings on the court system, an individual court observation and detailed information on the structure of the target report, with section headings, functions of each section, e.g. factual/interpretive/evaluative, and comments about scope, use of diagrams and what the marker would look for.)

> Observe proceedings and write a report on your visit.

First semester postgraduate Law, 2007:

(based on a lecture on judicial activism from a subject academic, a textbook discussion of a specific case, and three media articles conferenced in class time.)

> Albrechtsen takes the view that the majority decision in the case of Cattenach v Melchior 2003 is an example of "judicial activism at its most audacious and misleading". As such, she implies that the decision is without precedent.
> Is this attitude justified, in your opinion?

Appendix C:
Example of Student Feedback Sheets

MASUS WRITING DIAGNOSTIC EXERCISE
STUDENT FEEDBACK

This is a general feedback sheet, which advises students which LC workshops are relevant for their ratings. The sheet is adapted in cases where specific faculty-based follow-up support is given.

Name S.I.D.

KEY TO RATING

4 = excellent / no problems / accurate / very appropriate
3 = good / minor problems /mainly accurate / largely appropriate
2 = only fair / some problems / often inaccurate / often inappropriate
1 = poor / major problems / inaccurate / inappropriate

A = appropriate
NA = not appropriate

ASSESSMENT CRITERIA		RATING
A	Information and processing *This area includes skills of selection, interpretation and integration of data/information with text*	4 3 2 1
B	Structure and development of text *This area includes skills of organisation and use of evidence*	4 3 2 1
C	Use of appropriate academic English *This area includes skills of objectivity and choice of vocabulary*	4 3 2 1
D	Grammatical correctness *This area deals with accurate sentence structure and common errors*	4 3 2 1
E	Qualities of presentation - *spelling, handwriting, paragraphing*	A NA

What the ratings mean:

If you were rated 4 in all areas this means that your writing skills should be more than adequate to cope with the demands of first-year university. Most students will not get a rating of 4 in all four areas. If your rating is 3 in an area it means your writing skills in this area may be adequate but you still need to work on this area. Ratings of 1 or 2 indicate that there are weaknesses and you need to develop your skills in the designated area(s). If your ratings are 1 or 2, particularly in Areas C and D, you are strongly recommended to attend the LC workshops for those areas.

If your rating is 1 or 2 in:	these LC workshops will be helpful to you:
Area A: Information retrieval and processing	◆ Quoting, Summarising and Paraphrasing the Evidence ◆ Reading Strategies
Area B: Structure and development.	◆ Developing an Argument ◆ Analytical Writing ◆ Planning an Assignment ◆ Analysing the Assignment Question ◆ Essay Writing
Area C: Use of appropriate academic English	◆ Functional Grammar for Academic Writing ◆ Writing in an Academic Style ◆ Clearer Writing
Area D: Grammatical correctness	◆ Foundations of Grammar ◆ Independent Learning Program resources, online resources at http://www.usyd.edu.au/lc

STUDENT FEEDBACK LAW (Postgraduate)

For details of MASUS procedure for this cohort see p. 10. This feedback was given in addition to the general feedback sheet on p. 18.

The readings:

Janet Albrechtsen. 'A boy judged in the balance' *The Australian* 23 July 2003	Opinion piece Does not support the majority decision
Reg Graycar. 'A loved baby can't cancel out a clear case of negligence.' *Sydney Morning Herald* 21 July 2003	Opinion piece: Supports the majority decision
Adele Horin. 'A little bundle of bills.' *Sydney Morning Herald* 19 July 2003	Commentary: tries to present a balanced picture

The Task:

Albrechtsen takes the view that the majority decision in the case of *Cattenach v Melchior 2003* is an example of "judicial activism at its most audacious and misleading". As such, she implies that the decision is without precedent.

Is this attitude justified, in your opinion?

Some critical questions:

- What are the main issues of difference between the two opinion pieces?
- Does the commentary by Horin present a balanced point of view? Does it give any extra information?
- What is 'judicial activism' (JA)? Does Albrechtsen use it in a positive or a negative way? Is it necessary to define JA in your response?

Possible positions	**Possible strategic approaches**
Yes Albrechtsen's attitude is justified	Identify the main points in her argument. What evidence supports them? How will you deal with contra-arguments from Graycar's argument?
No, Albrechtsen's attitude is not justified.	Identify the main points in her argument. What contra evidence can you use to prove her wrong? What other information is useful for your argument?
Albrechtsen's attitude is justified to some extent	Identify the main points in her argument. Which ones are well supported? Which ones are not? How can you use information from the other articles?

General comments on class performance in all rating areas.

Area A: Use of source material:
In text citation:

- Most students used one system fairly consistently
- Overuse of direct quotes sometimes a problem

Main problem areas relating to source material:
- use of irrelevant information, (e.g. arguing for/against damages for pregnancy & birth)
- Misunderstanding of differences between the following:
  - Legal issues vs moral / societal issues: concepts of damages for pregnancy/childbirth vs damages for cost of childrearing; value of a child's life vs expense of childrearing

Area B: Structure and development of text.
Main problem areas:
- Lack of balance: too much description, not enough analysis / logical argumentation
- No clear statement or promotion of a position
- Not actually answering the question / answering a different question (e.g. what are the issues surrounding the majority judgement in Cattenach v Melchior?)

Some successful plans:

Essay A

Introduction: Brief outline of issues, position statement: A's attitude not justified – legal precedent and accepting social attitude exist.

Middle section:
- relevant precedents exist (evidence: 2 cases in Australia)
- Albrechtsen confuses value of life with costs of rearing a child. Judgement refers to the later – social acceptance for costing child rearing expenses in cases of child support.
- Albrechtsen feels religious institutions should be protesting. Perhaps their silence implies existence of social support,
- Conclusion. **Failure to award damages would have been making a special case in favour of medical negligence in cases of wrongful birth**.

Essay B

Introduction. Brief outline of issues, definition of Judicial Activism, position statement: difficult to separate legal and social issues so A's attitude is partially defensible.

Middle section:
- Albrechtsen's article represents a valid viewpoint and indicates widespread social concern. e.g. Bioethics Institute, Plunkett Centre for Ethics (ref. Horin)
- Publicity of decision could result in psychological damage to the child (ref Horin).
- Decision to award financial damages sends the wrong signal to society. Although the damages are specifically for expenses in rearing the child, the public could confuse the issue with a monetary value on the child's life (as does Albrechtsen).
- However: past precedents which award damages for costs of rearing children do exist (ref. Graycar, Horin) BUT situations are similar rather than the same.

Conclusion: To call the decision JA is not really accurate because some precedent does exist. However, the decision is controversial because society is not ready for it. Medical negligence had already been established and damages awarded for pregnancy and birth. That should be enough.

Some Introductions:

Example 1

The term 'Judicial Activism' refers to situations where justices take a creative approach to decision-making, instead of relying on the letter of the legislation, and on past precedent. The term is often used negatively, as Albrechtsen uses it here. The issue of 'wrongful birth' is an emotional one, and although many would sympathise with the emotional reaction of Albrechtsen, her attitude is not justifiable from a legal point of view.

Example 2

The legal issues involved in Cattenach v Melchior cannot be separated from social attitudes to the value of human life. This case is an example of the controversy which can arise when judicial decisions are not in tune with current social attitudes. Albrechtsen is right to protest at the majority decision in favour of awarding damages to the parents for the cost of rearing a child in the 'wrongful birth' category.

Something extra:

Looking at the nature of the argumentation in the sources:
Unlike the texts by Horin and Graycar, the language used in the opinion piece by Albrechtsen is full of persuasive language and emotional vocabulary.

Area C: Use of appropriate academic English.

This area was quite well handled. It covers the usual features of academic style: largely objective, abstract and technical. An important aspect is the clear signalling of relationships between ideas. Some students were a little too dramatic and emotional – remember, this is in the context of Law!

Area D: Grammatical correctness.

Main issues in this area: sentence structure, and language connected with argument/persuasion, e.g. using the grammar of possibility/probability/ advisability/suggestion.

Appendix D:
Example of MASUS Student Booklet

DIAGNOSIS OF ACADEMIC LITERACY SKILLS FOR STUDENTS OF FIRST YEAR ELECTRICAL ENGINEERING

Learning Centre and Department of Electrical Engineering
University of Sydney

Student identification number _____

Family name _____

Given name _____

ABOUT THIS DIAGNOSTIC PROCEDURE:

(1) This booklet contains the writing task which we are using to diagnose your academic writing skills. It is based on the article 'Rechargeable batteries for mobile communications' by N. Scholey, published in *Electronics and Communications Engineering Journal,* June 1995.

(2) This task contributes towards your semester assessment, based on your understanding of content. We are interested in how you use your knowledge, not how well you remember it, so you can refer to readings and lecture notes.

(3) When we consider your writing, we will look at skills needed for writing a task involving analysis of information, argumentation, discussion and evaluation.

(4) We will assess the following aspects of your writing:

(a) Information retrieval and processing:
Is your selection of information relevant and appropriate?
Can you transfer information correctly?
Can you integrate source material into your text?

(b) Structure and development of the text:
Have you answered the question?
Is your text well-organised?
Do you use the evidence well?
Does your writing flow logically?

(c) Use of appropriate academic English:
Are you writing in the appropriate style?
Are you choosing appropriate field-specific vocabulary?

(d) Grammatical correctness
Do grammatical errors interfere with the meaning?
Do you use appropriate and correct sentence structures?

As this is not an examination you will not be given a literacy score, but each area will be rated on a scale of 4 - 1.

Qualities of presentation - accurate spelling, clear handwriting, paragraphing - will not be rated, but will be generally judged as being acceptable or not acceptable.

We are seeking your permission to make use of the short essay you write for us today. The purpose of using your essay is to show other students some examples of different types of writing. We would use your essay anonymously (that is, without giving your name). If you agree, please sign here:

Signature: _____ (Please note: there is no penalty for not agreeing.)

INSTRUCTIONS FOR THE WRITING TASK:

1. Read the question carefully.

2. Take 5-10 minutes to plan your answer.

3. You may refer to material you have brought with you - e.g. the tutorial reading or your own notes - BUT REMEMBER, DO NOT PLAGIARISE!

4. When you are ready, you should write a short essay, 1 to 2 pages.

Here is the essay question:

"Of the 3 battery technologies, lithium ion is the most promising for the future."
Evaluate this statement using information from the article by N. Scholey.

Start writing your answer here:

Appendix E:
Examples of rated students texts from First Year Electrical Engineering

DIAGNOSTIC ASSESSMENT SHEET (EXPERT LITERACY RATERS)

Cohort Name S.I.D.

KEY TO RATING:

4 = excellent / no problems / accurate / very appropriate
3 = good / minor problems /mainly accurate / largely appropriate
2 = only fair / some problems / often inaccurate / often inappropriate
1 = poor / major problems / inaccurate / inappropriate

A = appropriate
NA = not appropriate

CRITERIA		
A. ***Use of source material*** *- is information retrieval and processing of visual, verbal and numerical data correct and appropriate for the task?*	(4) 3 2 1	
• most relevant data is employed • use of irrelevant data is avoided • visual and numerical data is interpreted correctly • visual and numerical data is transferred correctly • data is integrated with text • text is free from plagiarism	A √ √ √ √ √ √	NA
B. ***Structure and development of answer*** *- is the structure and development of the answer clear and generically appropriate to the question and its context?*	(4) 3 2 1	
▪ genre is appropriate to the task ▪ clear focussed thesis statement ▪ choice of Theme and New reflects structure ▪ critical evaluation of evidence ▪ use of evidence consistent with thesis ▪ statement of conclusion which follows from argument / evaluation and relates to the thesis	A √ √ √ √ √	NA
C. ***Academic writing style*** *- does the grammar conform to the patterns of written academic English appropriate for the task?*	(4) 3 2 1	
▪ appropriate use of grammatical metaphor and nominal group structure ▪ appropriate use of interpersonal metaphor ▪ demonstrated control of appropriate modality ▪ demonstrated control of cohesive devices - reference chains, textual reference ▪ demonstrated control of taxonomic relations ▪ appropriate choice of lexis	A √ √ √ √ √ √	NA
D. ***Grammatical correctness*** *- do grammatical errors interfere with communicating the message?*	(4) 3 2 1	
▪ clause structure follows recognisable and appropriate patterns of English ▪ correct subject/verb agreement ▪ consistent and appropriate tense choice, correctly formed ▪ correct singular / plural noun agreement	A √ √ √ √	NA
E. Qualities of presentation	not rated	
▪ spelling generally correct ▪ handwriting legible ▪ paragraphing reflects essay structure	(A) √ √ √	NA

Essay Topic:

"Of the 3 battery technologies, lithium ion is the most promising for the future."

Evaluate this statement using information from the article by N. Scholey.

Text A

There are currently 3 practical types of rechargeable cells for use in mobile phones: nickel cadmium (NiCd), nickel metal hydride (NiMH) and lithium ion (Li ion). Whilst at present the nickel-based technologies are more highly developed, continuing research in this area promises to make Li ion batteries the technology of the future. A number of features determine the practical success of secondary cells; most significant amongst these are the voltage and energy output capacity, the life span, the safety and the cost involved.

The Li ion cell stands apart from the nickel-based technologies in terms of both voltage output and energy density. It achieves open-circuit voltages of up to 4V, dropping to less than #V when discharged. This compares favourably with the 1-2V produced by nickel-based cells, as it reduces battery complexity - one Li ion cell often replaces several nickel-based cells. One drawback of Li ion cells is the considerable slope on its discharge curve. However, recent research has indicated that use of a graphite anode in a Li ion cell can produce extremely flat discharge curves.

Of considerable interest to users of mobile phones are the gravimetric and volumetric energy densities of the cells. Li ion cells offer a gravimetric energy density of 90 Whkg-1, far more than is available with NiCd (50 Whkg-1) and NiMH (51 Whkg-1) cells. Similarly, Li ion technology offers superior volumetric densities of around 203 Whl-1, far more than the 89 Whl-1 for NiCd cells and 149 Whl-1 for NiMH cells. Clearly, Li ion cells already open the way for smaller and lighter phones and they will continue to do so in the future.

Another area in which Li ion technology leads the way is expected life span. Up to 1200 cycles can be expected from a Li ion cell. By comparison, the nickel-based technologies provide 500-700 cycles. Clearly, this provides cost savings for users of Li ion cells.

Safety is a significant factor in the success of a cell. Whilst all the cells come in sealed packages, disposal of cells releases battery chemicals into the environment. NiCd cells contain cadmium - a toxic heavy metal. NiMH cells are safer but also contain potential carcinogens. Li ion cells contain dangerous solvents. However, the recent developments in lithium polymer cells suggest the Li ion cell has the most promise in this area in the future.

Several factors affect cost. Initial costs of Li ion cells are high. This is partly countered by extended life-span. Nickel-based technologies are produce din larger quantities - leading to economies of scale. As Li ion batteries are produced in larger numbers, costs should fall. Clearly this is a significant factor.

Li ion cells offer superior characteristics in almost all areas. They are the technology of the future.

DIAGNOSTIC ASSESSMENT SHEET (EXPERT LITERACY RATERS)

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A = appropriate
NA = not appropriate

CRITERIA		
A. ***Use of source material*** *- is information retrieval and processing of visual, verbal and numerical data correct and appropriate for the task?*	4 3 (2) 1	
	A	NA
• most relevant data is employed		√
• use of irrelevant data is avoided	√	
• visual and numerical data is interpreted correctly	√	
• visual and numerical data is transferred correctly	√	
• data is integrated with text		√
• text is free from plagiarism	√	
B. ***Structure and development of answer*** *- is the structure and development of the answer clear and generically appropriate to the question and its context?*	4 (3) 2 1	
	A	NA
▪ genre is appropriate to the task	√	
▪ clear focussed thesis statement	√	
▪ choice of Theme and New reflects structure		√
▪ critical evaluation of evidence	√	
▪ use of evidence consistent with thesis	√	
▪ statement of conclusion which follows from argument / evaluation and relates to the thesis	√	
C. ***Academic writing style*** *- does the grammar conform to the patterns of written academic English appropriate for the task?*	4 3 (2) 1	
	A	NA
▪ appropriate use of grammatical metaphor and nominal group structure		√
▪ appropriate use of interpersonal metaphor		√
▪ demonstrated control of appropriate modality	√	
▪ demonstrated control of cohesive devices - reference chains, textual reference		√
▪ demonstrated control of taxonomic relations		√
▪ appropriate choice of lexis		√
D. ***Grammatical correctness*** *- do grammatical errors interfere with communicating the message?*	4 (3) 2 1	
	A	NA
▪ clause structure follows recognisable and appropriate patterns of English		√
▪ correct subject/verb agreement	√	
▪ consistent and appropriate tense choice, correctly formed	√	
▪ correct singular / plural noun agreement	√	
E. Qualities of presentation	not rated	
	(A)	NA
▪ spelling generally correct	√	
▪ handwriting legible	√	
▪ paragraphing reflects essay structure		√

Text B

Throughout the article by N. Scholey the promise shown from the Lithium battery is quite apparent. The fact that it is in such an early development stage still, along with Nickel metal hydride, gives it much more potential than the Nickel cadmium which is reaching 'old age' as such. From Fig 1 it can be seen that the Lithium cell is capable of giving a much higher voltage out, over the life of the cell, compared to the other two. As it states, it would be advantageous in using this cell to power the phone at much higher voltage cut-off point, letting the phone be more powerful and charging made more simple. From Fig 2 we understand that the Lithium battery life will perform at a higher rate than the others and when the power supply runs out it will have discharged 100% making the recharge effective in recouping its original potential.

Reading on in the article the field operational use of the Li battery is much better as it operates more effectively than the others when conditions are not ideal, being high temperatures.

Lithium does not beat the other batteries on all fronts and does therefore have certain disadvantages with environmental aspects, and when operating in certain fields of study of its effectiveness. Mainly because of the early developmental stage of Lithium batteries though when compared to Nickel cadmium and its eventual retirements from use more than likely. Then with comparisons to Nickel metal hydride batteries it still seems advantageous in more ways than disadvantageous.

So after inspecting the article Lithium appears more useful but at early stages of development with it and Nickel metal hydride it can't really be said for sure which is better although Lithium seems ahead from data received.

DIAGNOSTIC ASSESSMENT SHEET (EXPERT LITERACY RATERS)

Cohort Name S.I.D.

KEY TO RATING:

4 = excellent / no problems / accurate / very appropriate
3 = good / minor problems /mainly accurate / largely appropriate
2 = only fair / some problems / often inaccurate / often inappropriate
1 = poor / major problems / inaccurate / inappropriate

A = appropriate
NA = not appropriate

CRITERIA		
A. ***Use of source material*** *- is information retrieval and processing of visual, verbal and numerical data correct and appropriate for the task?*	4 3 2 (1)	
	A	NA
• most relevant data is employed		√
• use of irrelevant data is avoided		√
• visual and numerical data is interpreted correctly	√	
• visual and numerical data is transferred correctly	√	
• data is integrated with text		√
• text is free from plagiarism	√	
B. ***Structure and development of answer*** *- is the structure and development of the answer clear and generically appropriate to the question and its context?*	4 3 (2) 1	
	A	NA
▪ genre is appropriate to the task	√	
▪ clear focussed thesis statement		√
▪ choice of Theme and New reflects structure		√
▪ critical evaluation of evidence		√
▪ use of evidence consistent with thesis		√
▪ statement of conclusion which follows from argument / evaluation and relates to the thesis		√
C. ***Academic writing style*** *- does the grammar conform to the patterns of written academic English appropriate for the task?*	4 3 2 (1)	
	A	NA
▪ appropriate use of grammatical metaphor and nominal group structure		√
▪ appropriate use of interpersonal metaphor		√
▪ demonstrated control of appropriate modality		√
▪ demonstrated control of cohesive devices - reference chains, textual reference		√
▪ demonstrated control of taxonomic relations		√
▪ appropriate choice of lexis	√	
D. ***Grammatical correctness*** *- do grammatical errors interfere with communicating the message?*	4 3 2 (1)	
	A	NA
▪ clause structure follows recognisable and appropriate patterns of English		√
▪ correct subject/verb agreement		√
▪ consistent and appropriate tense choice, correctly formed		√
▪ correct singular / plural noun agreement		√
E. Qualities of presentation	not rated	
	(A)	NA
▪ spelling generally correct	√	
▪ handwriting legible	√	
▪ paragraphing reflects essay structure	√	

Text C

In recent years in mobile phone industry have been developed a lots of mobile phone which it can be consider as rapid advance in technology.

These advance technology have been developed in mobile phones in order to bring more function that the phone can be performing, reducing in the size, and also weight. Therefore in battery industry must also take this opportunity for developing which have the capability to perform with the phone's numerous function. For these reason battery company is trying to do as good as they can in order to comparative with each other.

However there are three battery technology which are now on the market are Nickel cadmium, Nickel metal hydride and Lithium ion. Throughout the three battery technology Lithium can be consider as the most promising for the future of phone's battery, even those it is recent development.

Lithium ion technology have been produces a number of advantage in order to provide their capability for advance mobile's technology. Lithium ion have higher voltage in comparing with NiMH and NiCD which mean it contribute to greater energy density, therefore it provide sufficient power to operation a phone in a long period.

Also we must take into account of how long or in other words hw many cycles can be perform. However Lithium ion is the one which have the most cycles over these other two. Higher cycles which men it will can be use longer comparing with other two.

Also the weight of Lithium ion is the lightest which make easier to carry around. Lithium ion technology is little more environmental aspects than Cadmium ion.

One other thing that Lithium ion can be classifie as the most promising in future is the performing of it after a certain cycle is also higher than other two technology.