

An Evaluation of the Medicine-3802 MBBS Program

The Student Experience

Program Evaluation and Improvement Group
(PEIG), Faculty of Medicine, UNSW

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The MedSEQ was developed by the Student Experience Working Party led by Mr Patrick Boyle and Prof Michael Grimm. The report would not be possible without the detailed analysis of MedSEQ and other data undertaken by Dr Helen Scicluna.

This report was largely written by Prof Patrick McNeil and Dr Helen Scicluna.

Executive Summary

In addition to continuous evaluation and improvement activities that are an inherent part of the Faculty of Medicine's philosophy for the Medicine-3802 (MBBS) Program, the Program Evaluation and Improvement Group (PEIG) is undertaking a periodic more holistic review of the Medicine Program. This first report focuses on the student experience of enrolled students. The data reviewed comes predominantly from a range of student evaluative data, with some limited staff perceptions.

Key positive aspects of the UNSW MBBS program include excellent formal learning activities, effective learning environments, the provision of good resources, and learning that is effective for post-graduation practice. Students have a strong sense of community at UNSW. Clinical learning is strongly valued by students and many aspects of students' clinical experience are rated positively including good access to patients, helpful clinical administrators, supportive clinical teachers that stimulate interest in learning, and supportive hospital staff that all lead to valuable clinical experiences.

Students' experience of Phase 1 of the Program has shown significant improvement from the first cohort in 2004. Overall, students value many aspects of the integrated nature of scenario-based learning with a caveat that there appears to be some students who would prefer a more structured discipline-based program design. Despite these improvements, there is evidence that the instructional design of some scenario group sessions be reviewed, and a strong message that the Faculty devote resources to improving the selection, training and support of Phase 1 scenario group facilitators.

There is significant support from students and staff that Medicine-3802 is effective for developing generic graduate capabilities, such as self-direction, communication, teamwork and reflective practice, which was a primary aim of the design of this program. Evidence for this conclusion comes from the Medicine Student Experience Questionnaire (MedSEQ), the UNSW Student Satisfaction Survey, and an ongoing qualitative Phase 1 Evaluation.

There is initial evidence from a number of items in MedSEQ, and with open-ended comments, that students' experience of clinical learning in Medicine-3802 is more positive than in Medicine-3801. One explanation is that this is due to the more explicit development of generic graduate capabilities which are proposed to facilitate the style of learning needed for clinical environments in Phase 3 and post-graduation.

The major key negative aspect perceived by students relate to the assessment system. Areas for improvement include better communication with students about assessment expectations, more consistency and standardisation of marking of assessment tasks, the provision of better feedback on assessment performance, and better support for students in undertaking assessments. Year 5 students were the most negative with respect to these issues, and on the positive side, subsequent cohorts now in years 1-3 are less negative in 2008 than earlier cohorts, indicating that improvements may have already been instituted.

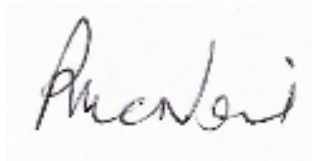
Students desire better communication pathways and support from staff about assessments, key policies affecting their learning, and issues relevant to transitions within the Program.

The provision of insufficient feedback remains a key negative for the Program, although there is evidence of improvement in Phase 1. Feedback on assessment performance is especially desired.

Many students express the need for a review of curricular issues, including the amount, structure and sequencing of the presentation of biomedical science and public health content. The student experience of the Independent Learning Project (ILP) is mixed, and further evaluations are required.

The overall level of satisfaction with students' experience in Medicine at UNSW is 76.1% in 2008 compared to 80.4% in 2006.

The PEIG has made 11 recommendations based on the data analysed in this report for consideration by the Curriculum Development Committee. A second report on Student Outcomes which PEIG hopes to complete within the next 12 months, will also inform further improvements to the MBBS Program to be considered by the Curriculum Development Committee.



Patrick McNeil, Chair, PEIG
May, 2009

Key Messages:

1. Students perceive many key positives during their experience of the UNSW MBBS program.
2. The integrated structure of MBBS3802 is strongly valued by many students and staff and there is evidence of ongoing improvements in Phase 1 since 2004.
3. Improvements are needed in the selection, training and support for Phase 1 scenario group facilitators.
4. Initial data suggests MBBS3802 is successful in developing generic capabilities important for clinical and post-graduation learning.
5. Student experiences of clinical learning in phase 3 are better than Med3801.
6. Students are adjusting to the new Assessment system but improvements are needed.
7. A moderate curriculum review is timely.

Introduction

In 2004, the Faculty of Medicine at UNSW introduced a new 6-year undergraduate-entry Medicine program leading to the degrees of Bachelor of Medicine and Bachelor of Surgery (MB,BS). This program (Medicine-3802)¹, compared to its predecessor (Medicine-3801), has a primary aim to explicitly develop a set of generic capabilities in graduates that will facilitate experiential learning that is needed for professional learning in clinical locations both as an undergraduate and in post-graduation professional life². These generic graduate capabilities are self-directed learning and critical evaluation; teamwork; effective communication; and reflective practice. Secondary aims were to (i) present content for learning in an integrated (rather than disciplinary) structure, and within contexts of authentic professional practice; (ii) improve the teaching and learning of clinical communication; and (iii) ensure the assessment system was strongly aligned with the stated learning outcomes of the program³.

The first cohort of students is currently in their final year of study. The framework for evaluation of the new Program has involved continuous evaluation and incremental improvement⁴. Thus, numerous minor and some relatively major changes have already been made to aspects of the Program over the past 6 years. This report brings together a range of evaluative evidence particularly focusing on the experience of students enrolled in MBBS-3802.

Five sources of evaluation data have been considered in formulating this report.

1. The Medicine Student Experience Questionnaire (MedSEQ) is a 32 item on-line survey of 5 broad aspects of the students' experience of the MBBS program. It was administered in September 2006 and October 2008 and was completed by ~50% of the student cohort with good representation of all sub-groups.
2. Data from the Course and Teaching Evaluation and Improvement (CATEI) process which collects student evaluations of individual courses within the MBBS program was analysed from years 2004 to 2008.
3. The UNSW Student Satisfaction Survey (SSS) is an on-line survey of representatives of all UNSW students including MBBS students. Data is available from the SSSs administered in 2007 and 2008.
4. The PEIG is currently undertaking a qualitative review of Phase 1 of the Program. Preliminary data has been included in this report.
5. Some data from a survey of Phase 1 practical classes undertaken in 2005 has been included⁵.

¹ McNeil HP, Hughes CS, Toohey SM, Dowton SB. An innovative outcomes-based medical education program built on adult learning principles. *Medical Teacher* 2006;28:527-534

² Candy PC, Crebert G, O'Leary J. Developing lifelong learners through undergraduate education. *National Board of Employment, Education and Training*. 1994.

³ Toohey S, Kumar RK. A new program of assessment for a new medical program *Focus Health Prof Education*. 2003;5;23-33

⁴ Gibson KA, Boyle P, Black DA, Cunningham M, Grimm MC, McNeil HP. Enhancing evaluation in an undergraduate medical education program. *Academic Medicine* 2008;83:787-793

⁵ Kumar RK, Freeman B, Velan GM, De Permentier PJ. Integrating histology and histopathology teaching in practical classes using virtual slides. *Anatomical Record* 2006;289B:128-133

Key Evaluation Questions

1. What are the students' perceptions of the quality of their experience of Medicine-3802, and can any differences be seen from the student experience of Medicine-3801?
2. What are the students' perceptions of the quality of their experience of novel elements of Medicine-3802, in particular the integrated structure of content presentation and learning, the mixing of students from 2 years within the same learning groups, the emphasis on self-directed learning, the independent learning project (ILP), and the new assessment system?
3. Is there evidence that the primary aim of Medicine-3802 is being achieved (generation of lifelong learners):
 - a. Is there evidence of development of the generic graduate capabilities?
 - b. Is there evidence that the experience of clinical learning is improved because of better generic capability development?
4. What areas of the student experience of the program could be improved?
5. Have there been any improvements in the student experience from 2006 to 2008?

The Medicine Student Experience Questionnaire (MedSEQ)

The MedSEQ instrument is a custom-designed survey generated in 2005 by the Student Experience Working Party (SEWP), a sub-committee of the PEIG. Its content was informed by literature on the student experience in higher education, key educational values of the Medicine-3802 program, and input from UNSW medical students in year 2005. More details about MedSEQ are available upon request⁶. MedSEQ consists of 32 items that probe 5 aspects of the students' experience of the MBBS program. These are:

- Organisation and Student Understanding of the Program
- Learning Teaching and Assessment
- Community Interaction and Value
- Student Support, and
- Resources

The response asked students to rate each item on a 5-point scale ranging from two levels of positive response (almost always, frequently), a neutral response (about half the time) or two negative responses (sometimes, only rarely).

In addition, students had the opportunity to answer two open-ended questions asking about the 'best aspects' of the program, and areas that 'need improvement'.

MedSEQ was administered to students in September 2006 and again in October 2008. On each occasion, ~50% of the student cohort completed the survey. Demographic analyses indicated that all key subgroups of the student body were represented in approximately equivalent proportions to the whole cohort.

The quantitative data was analysed as follows:

- A small number (37) of Year 6 responders in MedSEQ-2008 were excluded from analysis so that MedSEQ-2008 would represent students in Medicine-3802 only.
- MedSEQ-2006 data were compared to MedSEQ-2008 data for each item
- Year 5 students in MedSEQ-2006 data were compared to Year 5 students in MedSEQ-2008. This is the most valid comparison of students at similar levels of learning and maturity from Medicine-3801 versus Medicine-3802.
- Phase 1 students in MedSEQ-2006 (cohorts 2+3 of Medicine-3802) were compared to Phase 1 students in MedSEQ-2008 (cohorts 4+5 of Medicine-3802). This comparison was to examine for improvements in Phase 1, given the recognition of a 'pioneer' effect that the early years of a radically different program can exhibit important 'teething issues'.
- Years 1-3 students in MedSEQ-2006 (cohorts 1-3 of Medicine-3802) were compared to Years 1-3 students in MedSEQ-2008 (cohorts 3-5 of Medicine-3802), again to examine for improvements from the initial cohorts.

⁶ Boyle P, Hill B. The Medicine Student Experience Questionnaire (MedSEQ): Summary report of initial findings from the 2006 trial. *UNSW Report*. December 2006.

Based upon sound psychometric principles, only items that received strongly positive or negative responses, are reported on. These were characterised as key positives or key negatives. The criteria for each were:

- A key positive response is characterised by $\geq 50\%$ of students responding positively (frequently and almost always categories) and $< 20\%$ utilising negative categories (sometimes or only rarely).
- A key negative response is characterised by $\geq 33\%$ of students responding with negative categories (sometimes or only rarely).

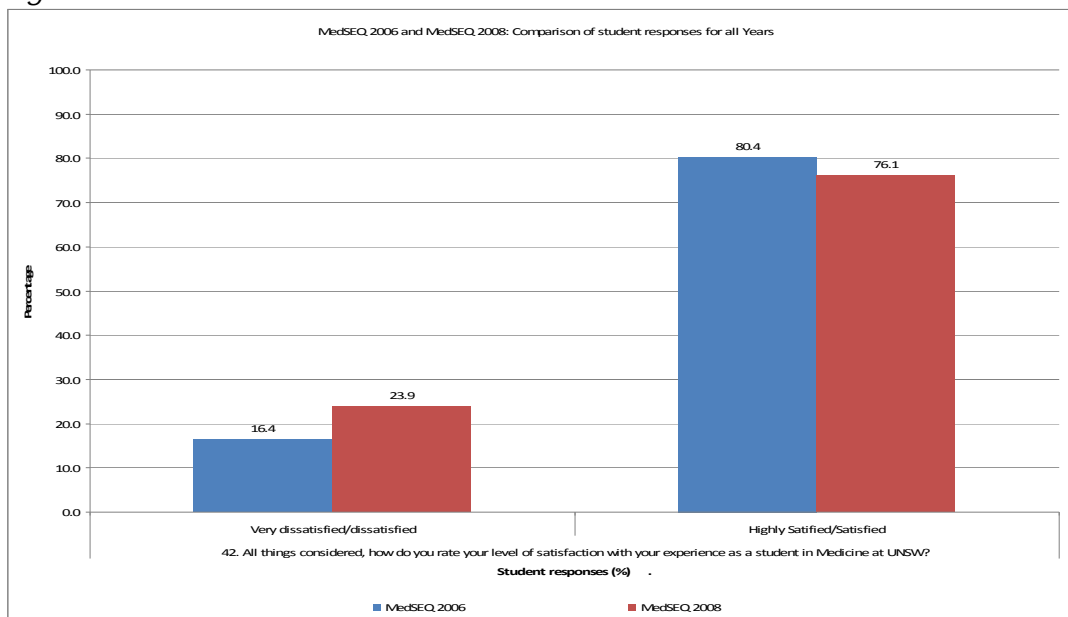
In addition, items that showed significant trends from 2006-2008 are also reported.

The qualitative (open-ended) data were analysed using the *CEQuery* software which searches student comments in each of the 'best aspects' and 'needs improvement' categories and records 'hits' within one or more of 5 domains (course design, outcomes, staff, support, and assessment) and 31 subdomains. Additional 'keyword' searches of student comments were undertaken (eg: clinical learning, clinical setting, ILP).

MedSEQ-2008 Outcomes

- **Overall Satisfaction**

Figure 1 – Overall Satisfaction



In 2008, students reported a slightly lower rating of their overall level of satisfaction with their experience as a medical student at UNSW (Fig 1). Importantly, nearly one quarter (23.9%) of students expressed overall dissatisfaction.

In subsequent figures, data is shown comparing all responses in 2006 v 2008, and separate histograms for Year 5 and Phase 1 in 2006 v 2008. For selected items, the comparison of year 1-3 in 2006 v 2008 is reported.

- **Key Positives**

Learning Activities, Resources and Environments

Figure 2 – Formal Learning Activities

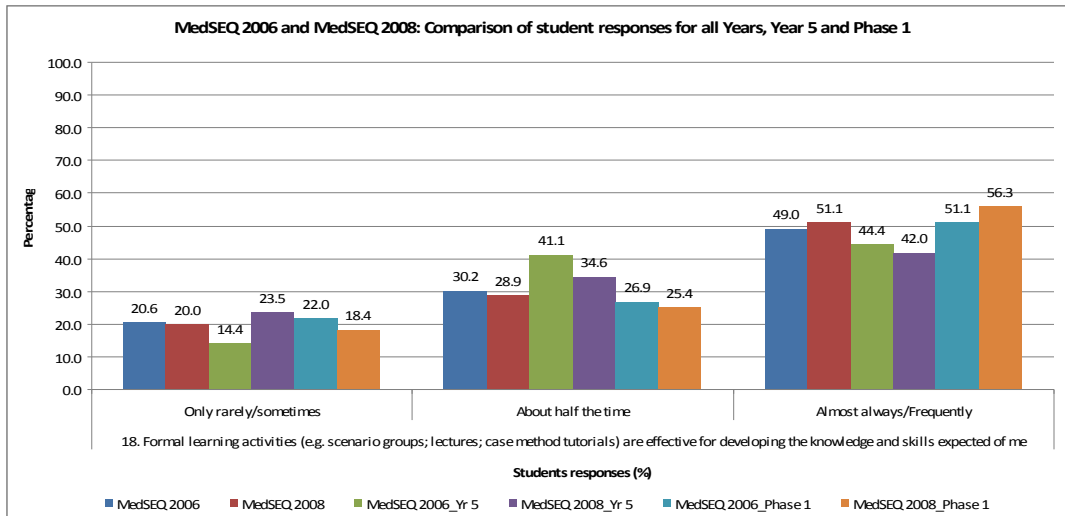


Figure 3 – Experiences Useful for Practice

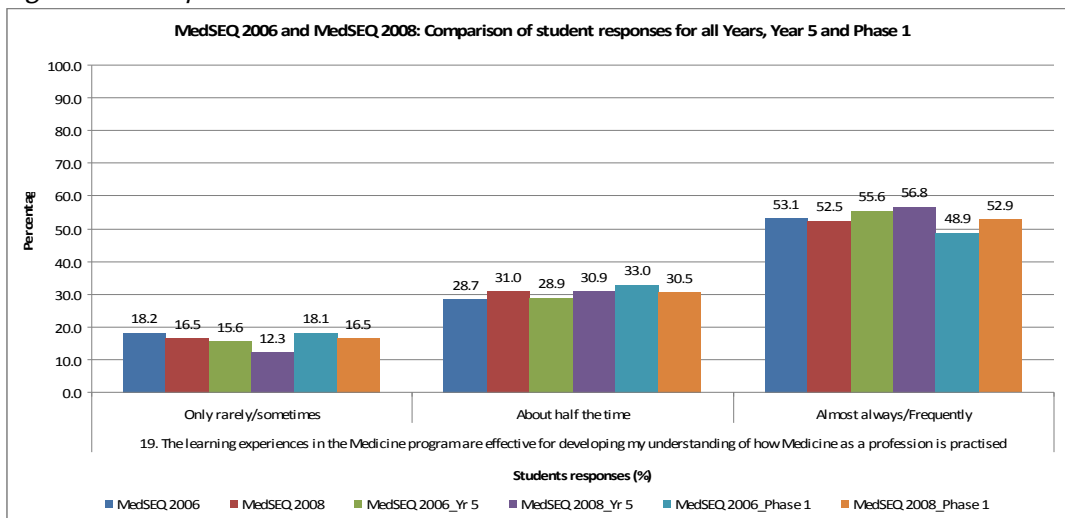


Figure 4 – ICT Resources

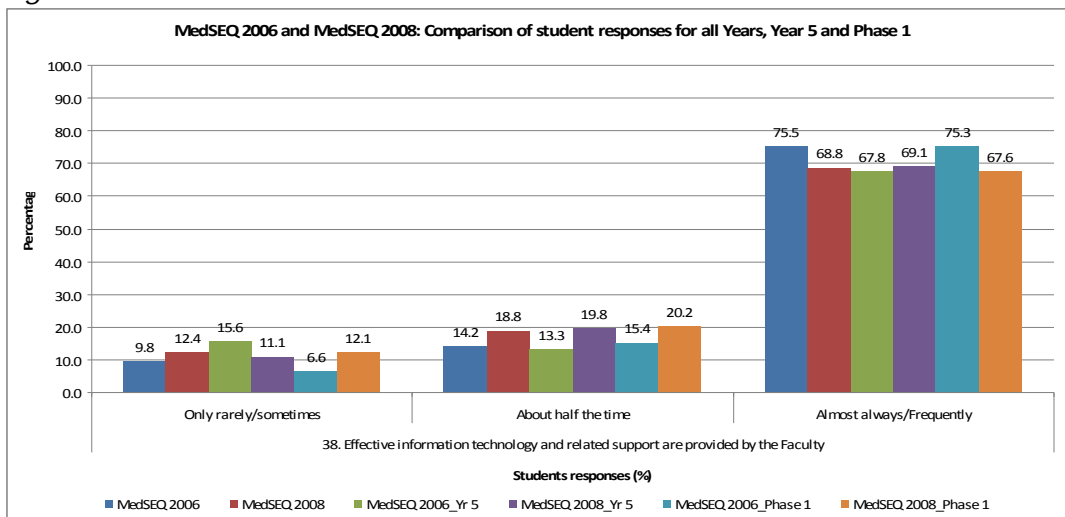


Figure 5 – Key Resources

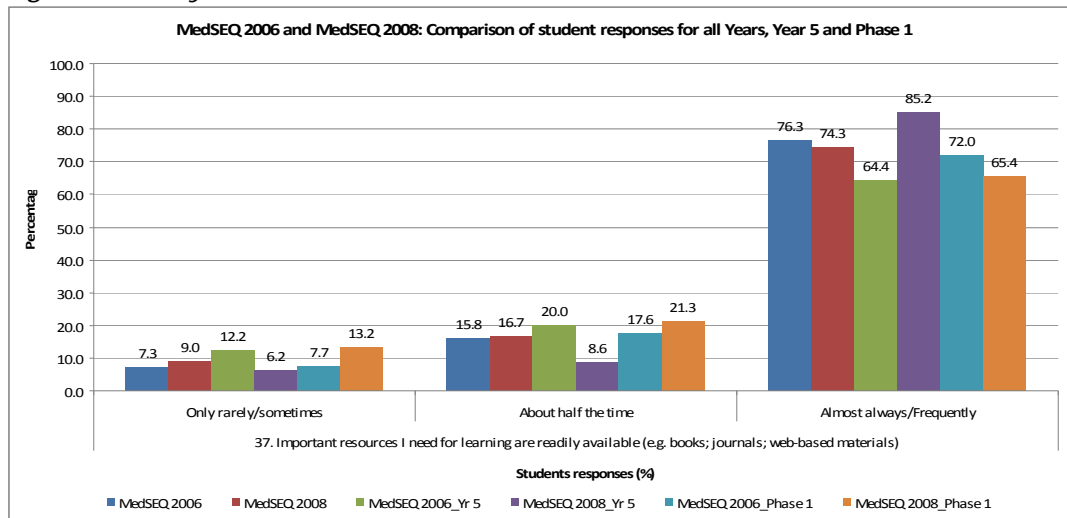
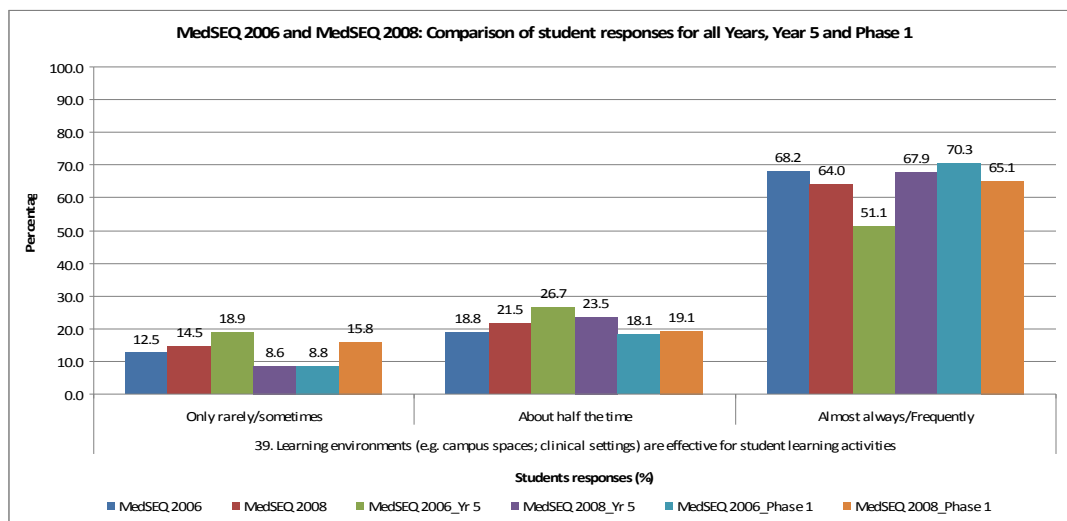


Figure 6 – Effective Learning Environments



Students are positive about the value of formal learning activities (new key positive in 2008 – Fig 2), that such experiences are useful for development as professional practitioners (Fig 3), that adequate resources, including ICT are provided (Fig 4-5), and that learning environments are effective for student learning (Fig 6).

Experience in Clinical Locations

A number of items are relevant to learning in clinical locations. The responses of Year 5 students in 2008 (cohort 1 of Medicine-3802) are substantially more positive than those of year 5 students in 2006 (final cohort of Medicine-3801) (See Figs 7 through 12). Note also data for year 5 students in figures 5 and 6 indicating a more positive experience for Medicine-3802 students compared to Medicine-3801 students.

Figure 7 – Access to Patients

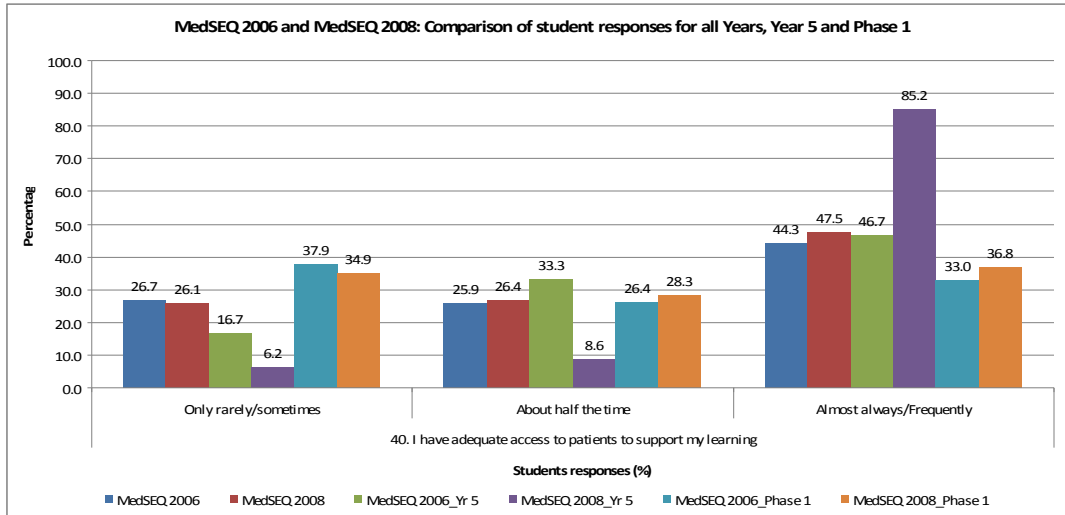


Figure 8 – Helpful Clinical Administrative Staff

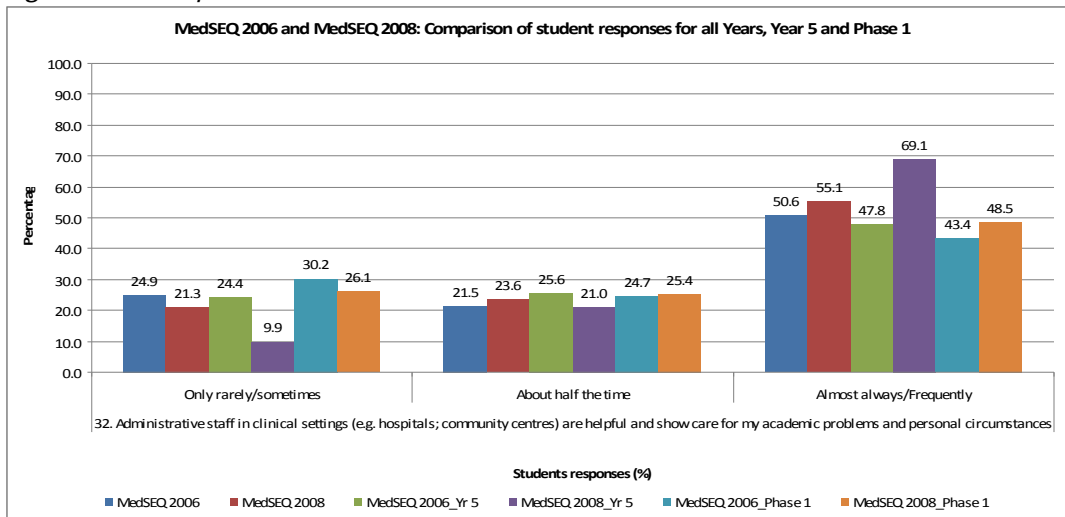


Figure 9 – Supportive Clinical Teachers

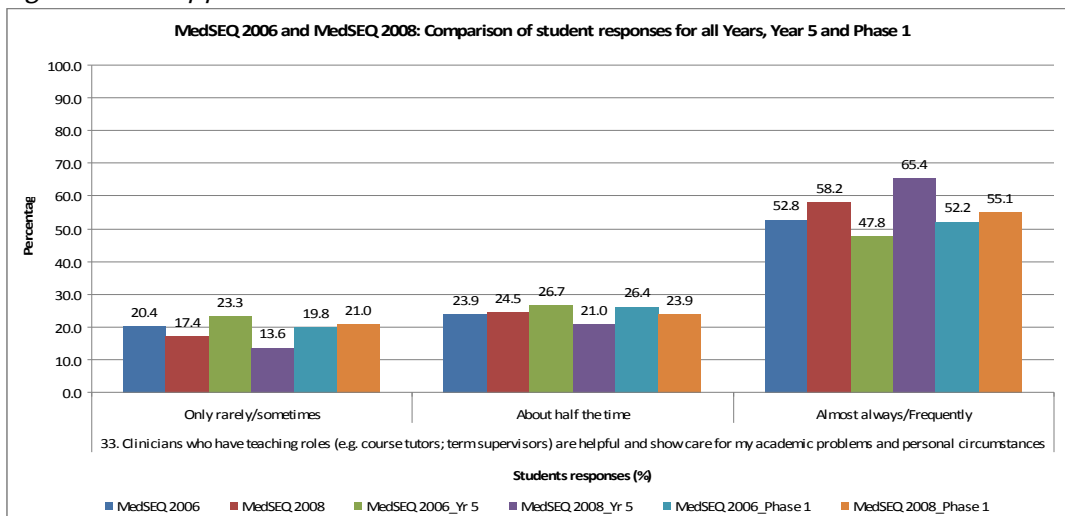


Figure 10 – Supportive Other Clinical Staff

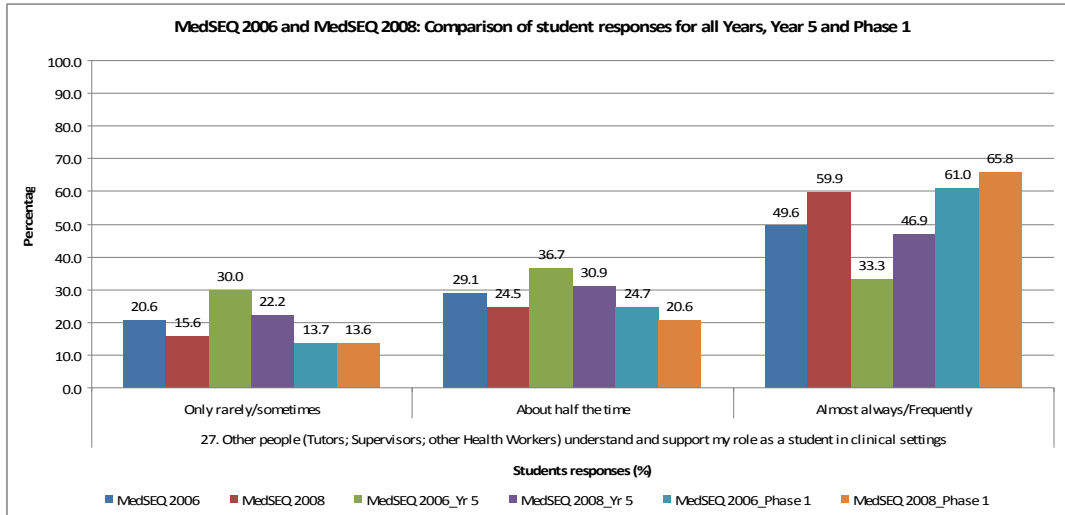


Figure 11 – Valuable Clinical Learning

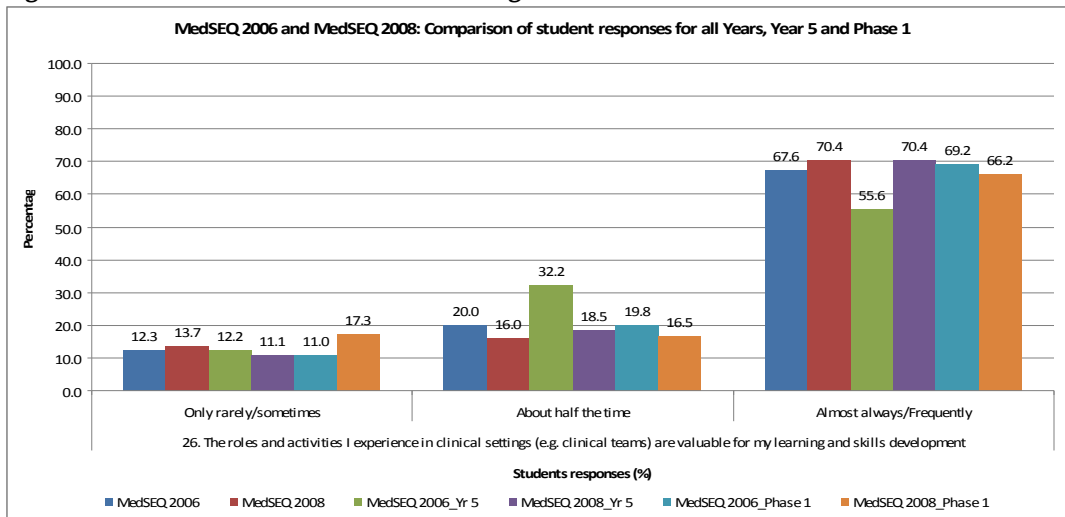
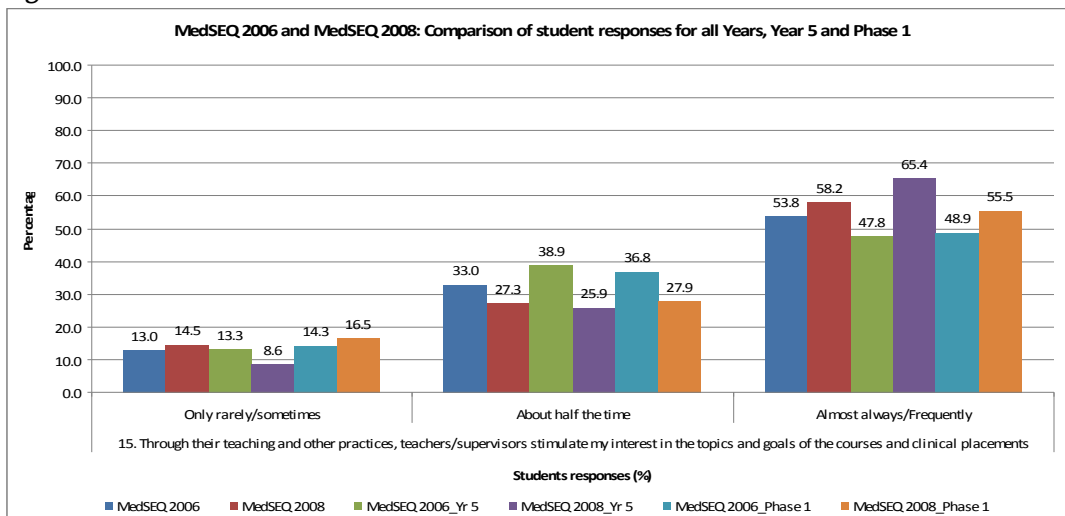


Figure 12 – Teachers Stimulate Interest



Sense of Learning Community

Students find the communities in which they participate, and relationships with other students a highly positive aspect of their student experience at UNSW-Medicine.

Figure 13 – Beneficial Communities

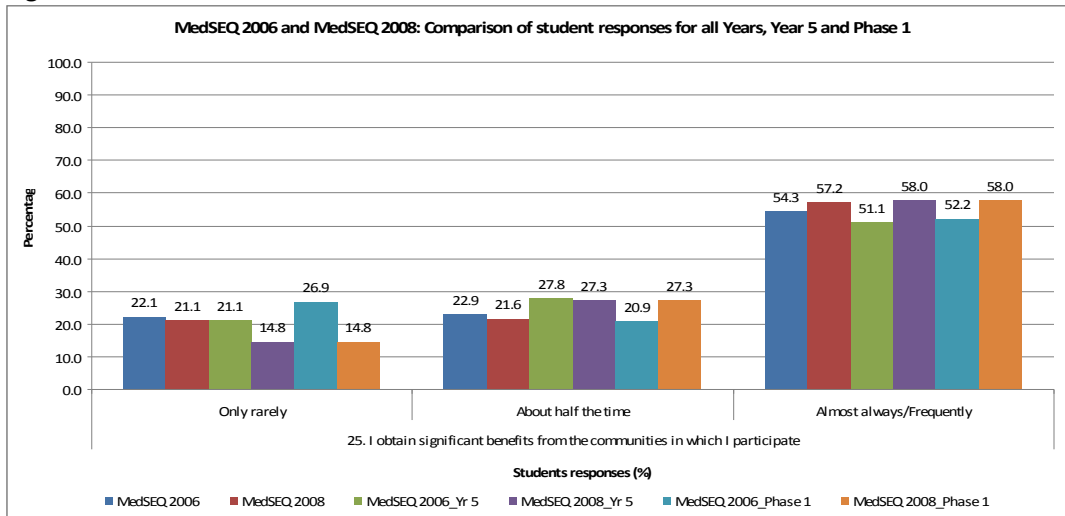
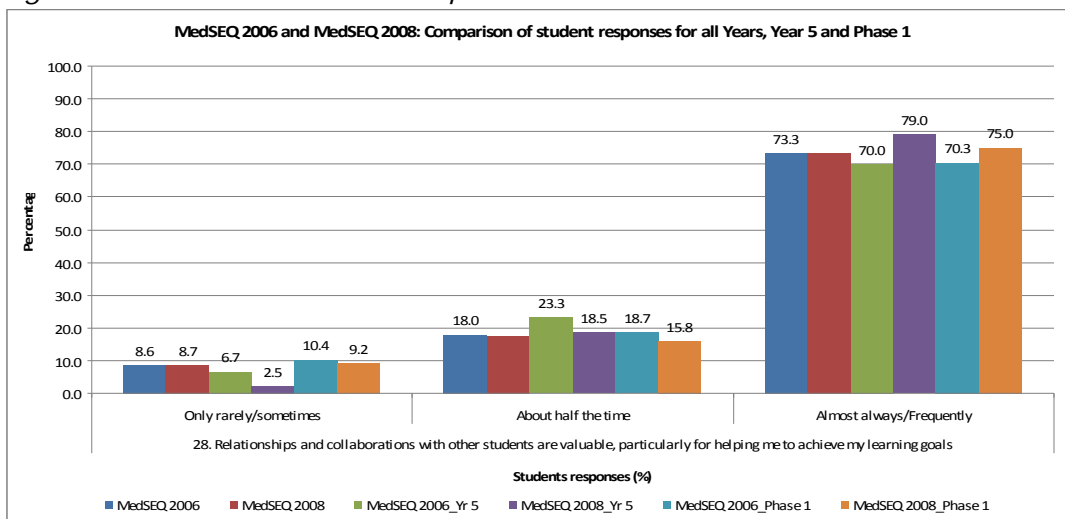


Figure 14 – Valuable Relationships



• **Key Negatives**

Students negatively rate a number of aspects of the formal assessments, in particular the provision of support when students faced difficulties with assessments (Fig 17). Year 5 students in 2008 are much more negative than Year 5-2006 students in the consistency of assessments with communicated learning expectations (alignment) (Figs 15), and the clarity of communication about assessment requirements (Fig 16). On a positive note, phase 1 and year 1-3 students are more positive about alignment of assessments with learning goals in 2008 than in 2006 (Fig 15), indicating improvement from 2006 to 2008. The negativity of year 5 students about assessments in 2008 is perhaps due to this cohort being the first to encounter the new assessment system.

Assessments

Figure 15 – Alignment with expectations

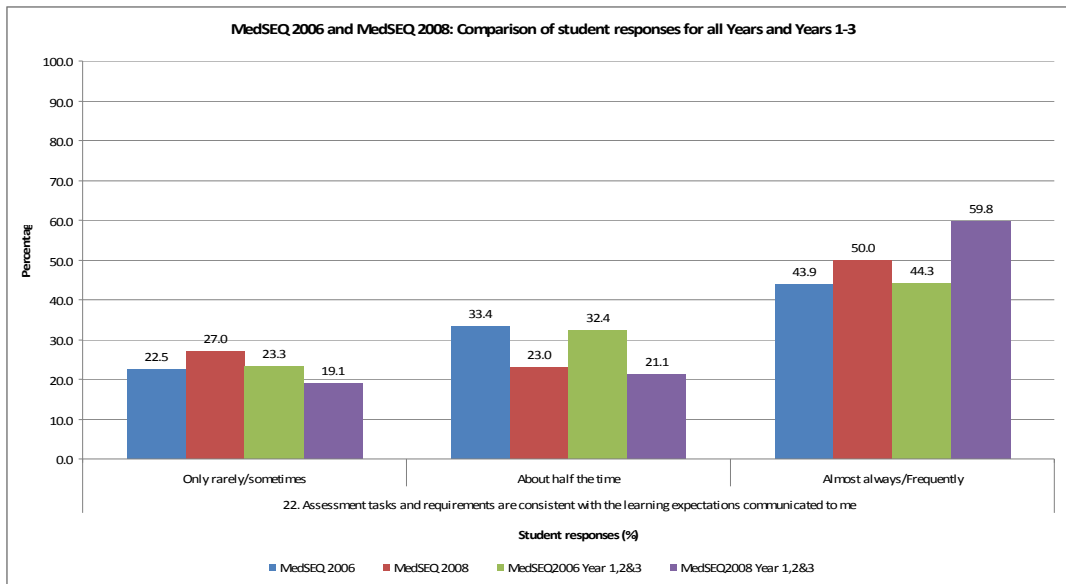
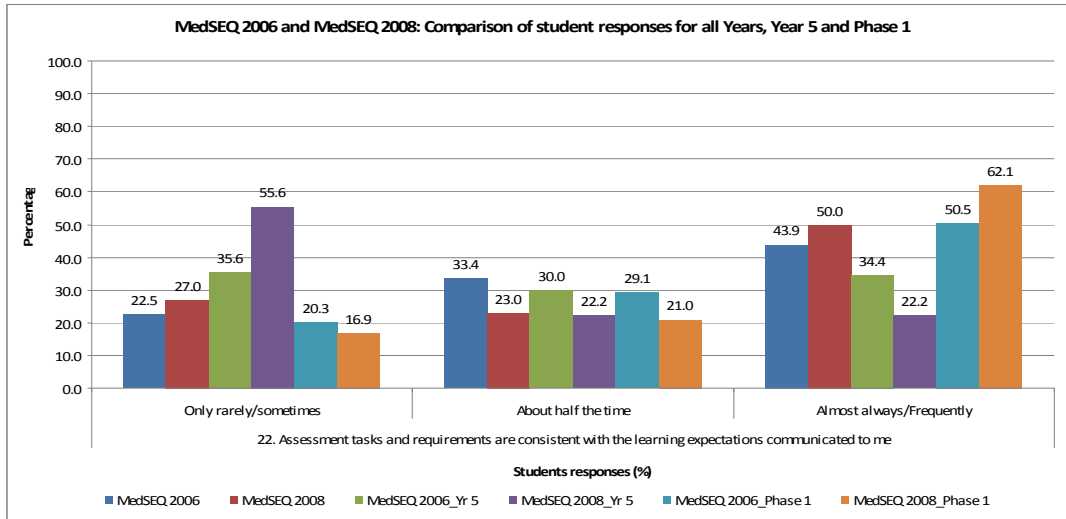


Figure 16 – Communication of assessment requirements

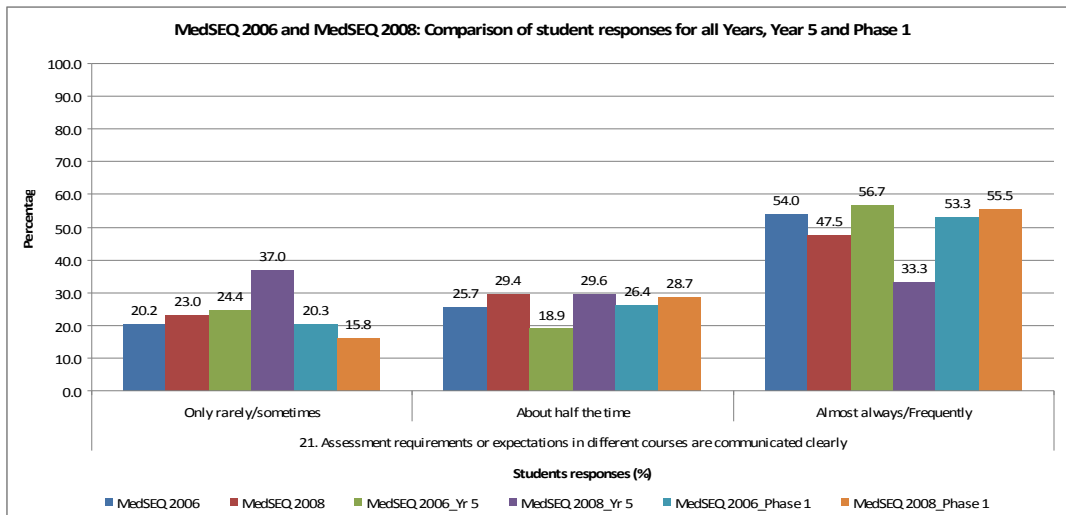
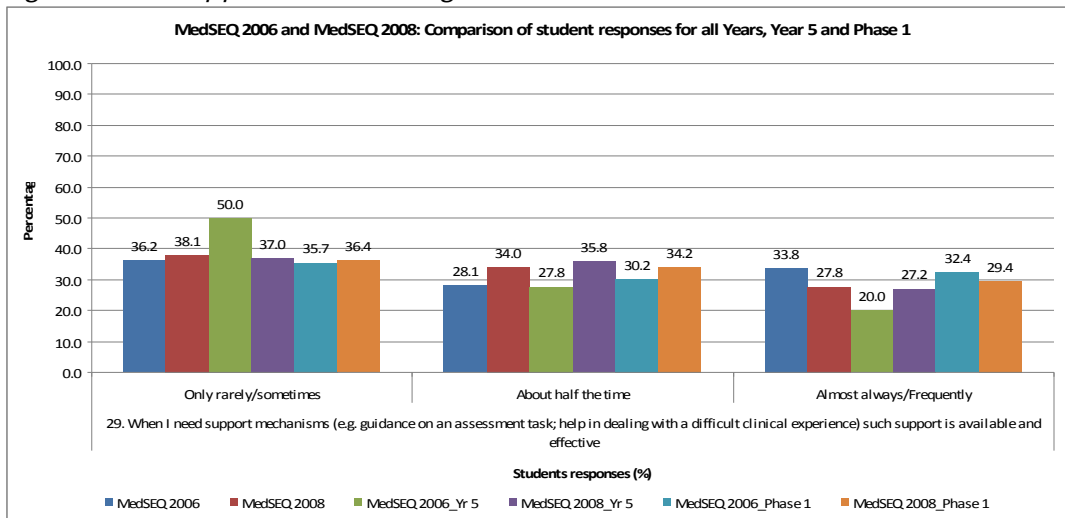


Figure 17 – Support for Learning, Assessments



Feedback

Lack of feedback, (Figs 18-19) and poor communication about policies and transitions (Figs 21-22) are clear key negatives of the student experience that need improvement. In 2006, the faculty’s communication about learning goals was a key negative. However in 2008, there has been substantial improvement especially with phase 1 and year 1-3 students (Fig 20).

Figure 18 – Provision of Feedback

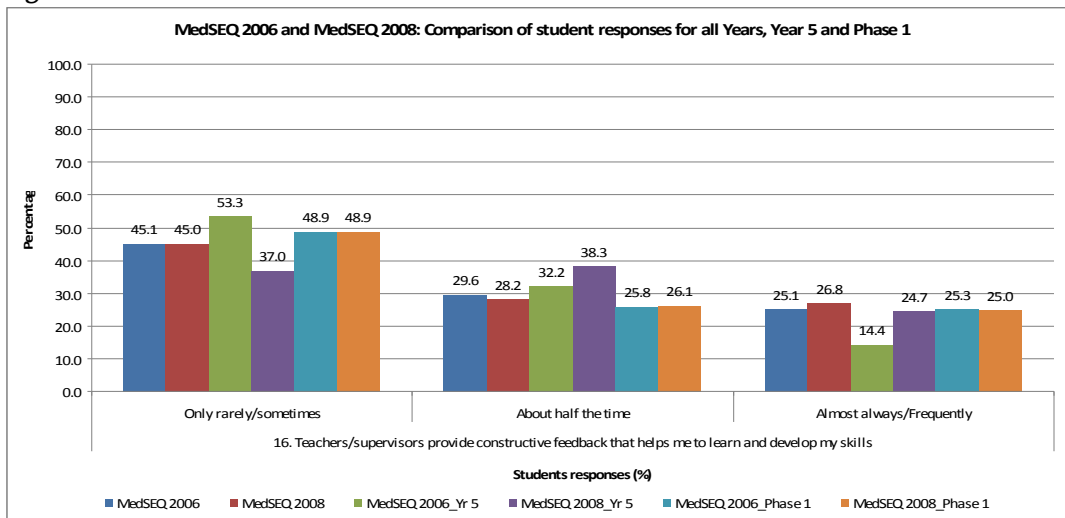
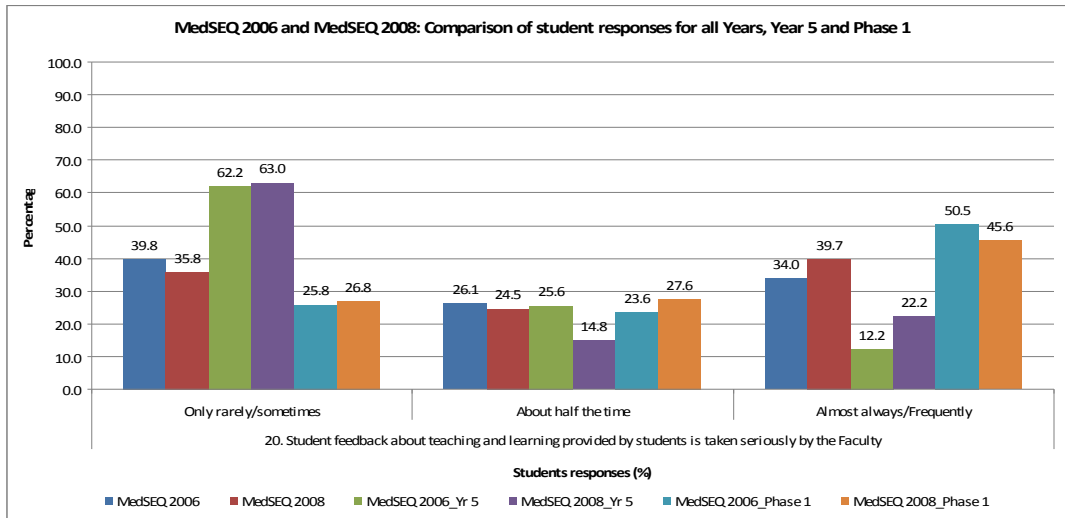


Figure 19 – Feedback Acted Upon



Communication with Students

Figure 20 –Communication about Learning Goals

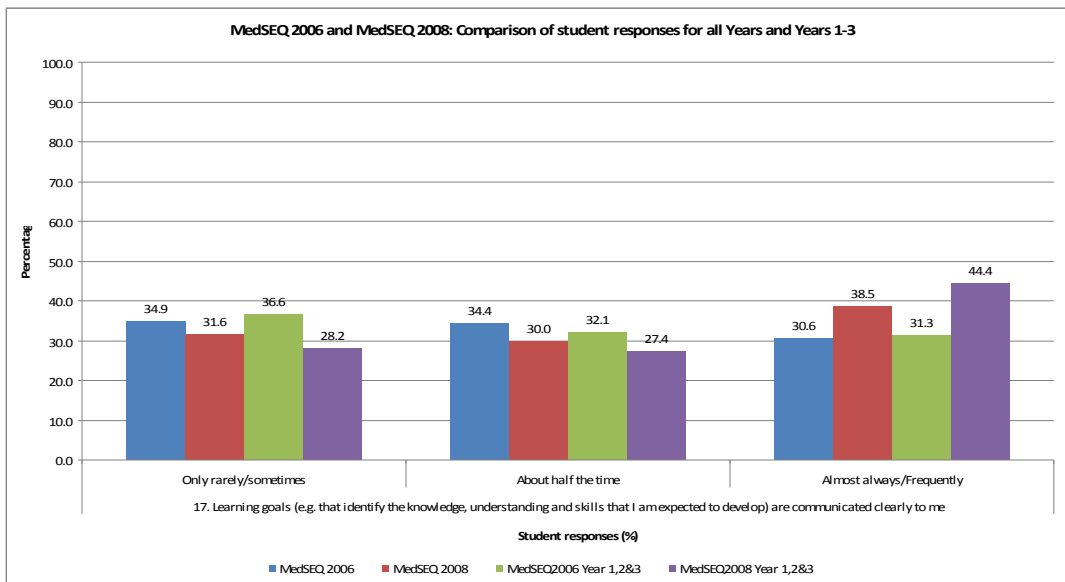
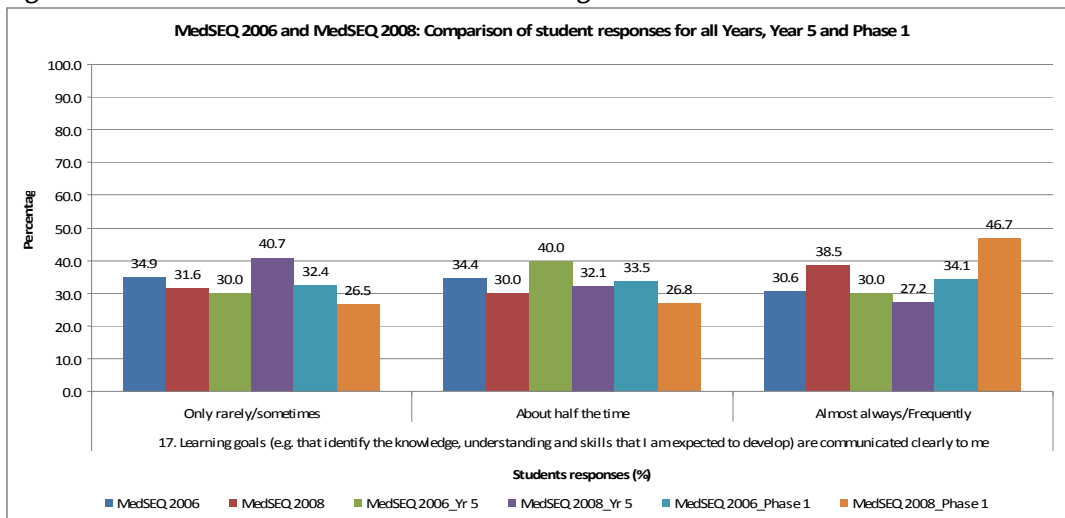


Figure 21 – Communication of Policies

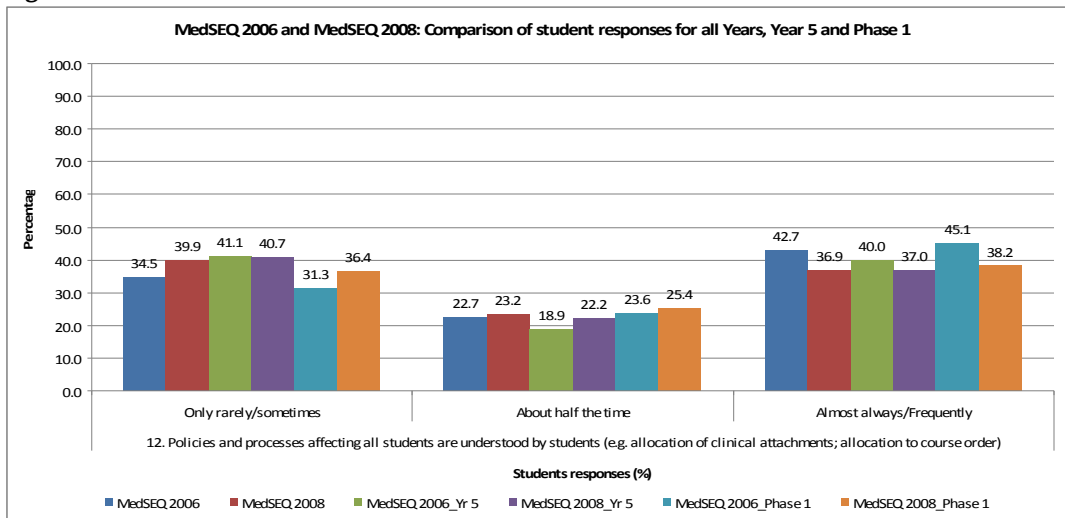
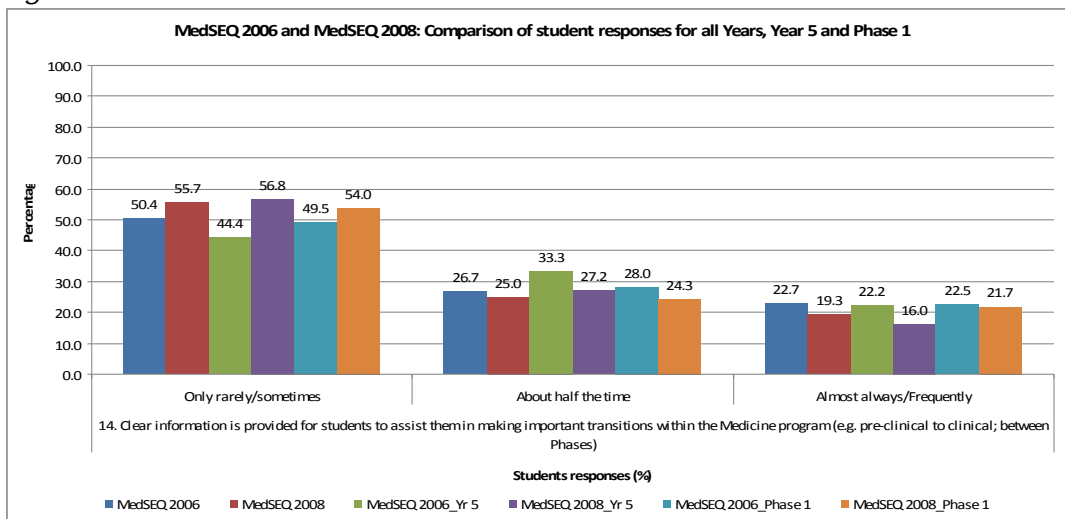


Figure 22 – Communication about Transitions



MedSEQ-2008 Open-ended Comments

A high proportion of students provided comments when they were asked to describe “The best aspects (BA) of the Medicine Student Experience” and “The features of the Medicine Student Experience that need improvement” (NI). There were a total of 942 comments (449 best aspects and 493 need improvement). The collected data have been analysed using the *CEQuery* software program which searches comments for ‘hits’ to categorise the qualitative data into 5 broad domains and 31 subdomains. *CEQuery* also enables searches of the comments using specific terms.

The *CEQuery* analysis identified 1929 ‘hits’ in the 942 comments, of which 642 hits were in the ‘best aspects’ and 1287 hits were in the ‘need improvement’. The most common comments (rank 1-5) related to subdomains within the Course Design and Staff domains, a pattern which is very similar to an analysis of 3,589 open-ended comments in the 2008 UNSW-wide Student Satisfaction Survey (Table 1). The domain of Outcomes_knowledge/skills was the 8th ranked, followed by comments related to Assessment and Support.

Table 1 – Most common domains commented upon in MedSEQ-2008

<i>CEQuery</i> domains	UNSW students*	MBBS Students**		
	Rank	Rank	BA [#]	NI [#]
Course Design				
Flexibility	1	2	58	127
Methods	2	1	93	137
Structure	4	4	53	109
Staff				
Quality	3	3	89	86
Teaching Skills	5	7	28	74
Accessibility	6	5	66	57
Support				
Resources	7	11	27	44
Infrastructure	8	16	9	24
Social affinity	12	6	53	50
Assessment				
Standards	11	9	7	87
Feedback	17	10	1	71
Expectations	21	10	3	69
Marking	20	14	1	41
		Total Hits	642	1287

* From 2008 Student Satisfaction Survey, ** From MedSEQ-2008, # Number of Hits

As seen in Table 1, there were relatively similar numbers of ‘hits’ in ‘best aspects’ and ‘needs improvement’ for comments relating to ‘course design’, ‘staff’, and ‘support’ domains (taking into account the relative total hits in each category). However, most comments in the ‘assessment’ domain were in the ‘needs improvement’ category.

Representative comments have been grouped below in these primary domains, as well as comments relating to clinical learning, and generic capability development.

- **Program Design/Structure**

Comments relevant to the program design (including methods, structure, flexibility and relevance) were by far and away the most frequent issue raised by students in both the 'best aspects' and 'need improvement' categories with 35% of total hits in this domain. There was a clear bipolarity of opinion among the student cohort, with many students citing features of the program design as some of the best aspects of the Medicine program, whereas numerous other comments indicated that these same aspects needed considerable improvement. Example comments from the 'best aspects' are listed below:

"I like the integrated approach centred around scenarios where the different disciplines link the integrated scenarios I find are incredibly helpful and make the learning enjoyable ... I like the scenario-based learning style, which allows me to appreciate different aspects of diseases and patients ... the integrated approach to medicine scenario based learning is much more interesting and effective method of teaching as opposed to science based teaching ... integrated learning being exposed to different areas of medicine ... the integration of basic science and clinical experience from the beginning of the program ... the integrated manner of having scenarios and arranging lectures and practicals to increase understanding ... I enjoy the integration of clinical aspects and sciences ... the integrated nature is appealing ... the integration and complementary nature of different learning activities within the program ... learning across varied environments ... the integrated approach of teaching both the medical science and its application while still humanising the course with constant activities of how a diagnosis will effect the patient throughout their life in more than just medical aspects ... I think the integration of different disciplines in the consideration of a scenario makes what we are learning more relevant to the actual people we will be dealing with ... integration of areas such as physiology, anatomy and pharmacology helps greatly in understanding the concepts ... very good integration across the key disciplines of medicine ... when scenarios come together and make sense, the course is very interesting and enjoyable."

On the other hand, many students found the integrated structure of the program an area where they saw improvement needed. For example:

"One major drawback in the new program is that the integration of various disciplines in the phase 1 had been done at the cost of removing a wealth of basic sciences knowledge ... a higher emphasis on biomedical teaching during phase 1 [needed] ... more didactic teaching needed ... more basic sciences teaching ... the clinical and basic sciences are taught in a very haphazard, disjointed, unstructured way that makes learning them very difficult ... more structured learning is needed ie. more lectures and tutorials; less spare time ... include more basic sciences into the curriculum, and not relying solely on self-directed learning ... the lecture content across phase 1 and 2 is very poorly planned ... more structured basic science lectures ... program structure logical flow of learning and building upon previous knowledge and experiences does not exist in this course ... I think a more structured course might help ... the 8 week blocks do not function properly and are not cohesive ... while I understand that the course encourages self-directed learning, I feel that there is a lack of resources, ie comprehensive notes to help my understanding."

The vertical integration of students within learning groups was generally viewed as a positive experience:

"I think the integration between first and second years is really good in the sense that it helps you take on more roles, is social and helps me a lot with my learning ... integrating 1st and 2nd years is great ... mix of 1st and 2nd years [best aspects] ... integration of students of different levels of experience ... the combining of consecutive year groups in phase 1 ... vertical integration is highly effective ... collaborative work with fellow med students that span across a number of years in the course is beneficial for team work skills and group learning."

Students' experience of scenario group sessions appeared highly variable. In best aspects:

"I feel scenario group sessions are an excellent place to consolidate knowledge with peers and the facilitator ... scenario groups are helpful most of the time ... scenario groups are fun and interactive ... the way sgs support learning activities in lectures, practicals and tutorials ... small groups where we learn eg tutorials, sgs."

However, there were many comments indicating a need to improve scenario group sessions:

"scenario group for phase 1 still need work ... scenario group sessions are ineffective ... often felt non-productive and purposeless ... sg sessions are quite pointless most of the time ... sg sessions need to be clearly linked to clinical realities ... more relevant and provide actual learning ... scrap scenario group sessions, especially if facilitators handling those sessions do not have direct knowledge to medicine ... shorten scenario groups ... more structure to some of the scenario group sessions ... reduce sg time ... the sg sessions need to be more structured ... at times sg can be quite pointless ... while I find the scenario-based learning style of phase 1 effective and enjoyable, I feel that greater emphasis on the scenario in relation to the learning activities would help ... phase 1 good overall, but sg should be replaced with more science/ clinical based tutorials ... scenario groups could be used more effectively sometimes to cover the content of the course better so we can consolidate our knowledge ... sgs contribute greatly to forming student bonds, but they are mostly a waste of time ... scenario group sessions would be better appreciated if there was more direct and specific focus with some of the more challenging and stimulating elements of the course particularly the medical science and clinical practice ... more structure to some of the scenario group sessions. "

Many students commented on their experience of scenario group facilitators:

"sgs sessions can be utterly useless depending upon the quality of the facilitator ... get better sg facilitators, some are very good but some so vague so sg sessions become useless and its luck of the draw which one you get ... scenario group tutors are highly varied in quality many of us are not satisfied with facilitators who know little about the course, sg sessions then are just a waste of time ... experienced facilitators for scenario group sessions [are needed] that are adept in communicating and stimulating learning ... better preparation for scenario group facilitators [needed] ... there is not much consistency between facilitators, and this can have a great impact on how the scenario groups run ... facilitators of our scenario group sessions needs to be improved ... reading from the facilitators guide about something they have no idea about is not exactly facilitating ... scenario

groups would be better if all facilitators were knowledgeable and competent ... the staff especially our scenario group tutors are always really helpful and guide our learning effectively ... personally I have had one facilitator who was absolutely fantastic and he has had a significant influence on me. Most facilitators however, are nowhere near this good."

A significant number of students also commented on curricular issues including a desire for a longer Health Maintenance block in phase 2, review of public health learning, more basic science teaching, and questions about the value of the Independent Learning Project (ILP) (see below).

- **Teaching Quality (Staff)**

The second ranked domain (21% of total hits) was Staff, in particular staff quality, teaching skills and accessibility. As can be seen from table 1, the comments were relatively evenly split between 'best aspects' and 'need improvement' with many students commenting positively or negatively about their experience of the teaching staff.

"good lecturing ... teachers are very good ... teaching is of high quality ... enthusiastic, dedicated and accessible clinical tutors ... the teachers and tutors are generally very friendly, open, and able to answer questions ... exposure to some inspirational teachers ... access to very high quality teaching and academic support ... the helpful and supportive tutors and facilitators ... some of our lecturers are particularly inspiring and helpful in their teaching practices ... their passion and love of the subject really comes across strongly and their lecturing techniques are very interactive ... excellent teachers ... the support from tutors and facilitators is great ... interaction between course tutors and the students are very valuable ... the staff are very helpful and seem to have a genuine interest in our learning experience ... very helpful teachers ... passionate teachers ... effective facilitators."

These comments should be balanced with those noted above concerning some scenario group facilitators, as well as:

"although a lot of the teachers are very good, others are not able to teach the content properly in an organised and coherent way ... doctors do not know how to teach and do not take their responsibilities as a teacher seriously ... scenario group supervisors who do not know what they are doing, clinical teachers that do not know what to teach ... some teaching staff are not effective in teaching, despite a clearly superior knowledge ... I think there should be better screening of lecturers ... tutors are often very good but their teaching skills really vary ... some tutors also simply don't seem to be interested in teaching us ... lack of access to tutors, demonstrators, admin staff etc."

Students were generally positive about their experience of the new integrated laboratory and practical classes. For example the following comments were given under 'best aspects':

"very useful science practicals especially histopathology and anatomy... anatomy, histology, pathology and microbiology practicals are usually very informative ... anatomy pracs are extremely helpful ... G2G4 histopathology practicals are the best practicals we ever have ... practicals very effectively stimulate my interest and promote self-directed learning ... interactive anatomy and pathology sessions."

In addition, there were 21 other individual comments that listed anatomy or pathology practicals under 'best aspects' of the program. Within 'needs improvement' comments indicated a desire for greater access to the anatomy dissecting room - eg:

"allow access to anatomy labs ... anatomy lab to be more flexible to freely study the specimens in their own time, perhaps with supervision of senior medical student ... need access to the specimens for more than just 10-20 minutes at the end of the anatomy prac."

- **Assessment, Support for Learning, Feedback, and Communication with Students**

Comments about assessments were the third most common (17% of total hits) but were overwhelmingly in the 'need improvement' category (see Table 1). Many comments expressed disappointment about the lack of feedback on exam performance, and lack of communication from the Faculty on expectations and guidance about assessments. Other comments centred on a perceived lack of consistency in assigning marks/grades. The detailed file of comments on assessment will be forwarded to the Assessment Working Party and relevant committees, but some examples follow:

"more consistent marking of assignments (clinicians often have very different expectations) ... assessment marking requires greater standardization ... the assessments in medicine have been very subjective and unfair for some students ... assessment in phase 3 is very subjective ... it is very difficult to improve between assignments as if marker feedback is minimal or confusing there is no way to clarify results ... I don't believe there is enough feedback given on exam results or assignment/group project results ... there should be a system in place whereby we can ask to speak to someone about our marks ... the lack of feedback from assessments makes it difficult for students to understand what they have done wrong and how to improve ... more information to students about format of upcoming exams ... personally it is very hard to know how far to go with study because often exams surprise me with quite in-depth questions that weren't the emphasis in lectures or tutes ... medical faculty change things especially assessments ... information on assessment activities and progression could be a lot clearer and better explained ... more explicit explanation about what is required in assessments in phase 2, more clarity on marking criteria ... assessment process needs to be explained more clearly ... need more lectures or information on what is to come ... clearer information on course structure and structuring of med program ... info sessions [needed] for 2nd years about eop [end of phase] exam requirement ... it would be helpful to spend a lecture in Foundations explaining how assessments etc are organised."

- **Clinical Learning**

A search of comments using 'clinical experience' and 'clinical setting' revealed a large number of comments (over 70) citing clinical learning as one of the best aspects of the medical student experience. For example, best aspects were listed as:

"the clinical experience at the various hospitals ... clinical experiences ... early clinical experience ... the integration of basic science and clinical experience from the beginning of the program ... integration of student into clinical team ... exposed to the clinical setting in phase 1"

Negative comments indicated a desire for additional clinical experiences, especially in phase 1.

When all comments from year 5 students were extracted, a large proportion of their 'best aspects' comments related to their clinical experiences:

"clinical experiences with clinicians and real patients ... being part of clinical teams ... teaching within the clinical setting ... clinical exposure, clinical exposure, clinical exposure ... being part of a clinical team ... clinical experience in the hospitals ... the clinical experience, being attached to a team, see how things are being done, how patients are being managed and learning on the job ... clinical attachments and good tutors ... many clinical tutors are such good teachers and they often become role models ... being able to choose clinical experiences ... the last 3 clinical years ... clinical contact with patients, tutors and lecturers, the "apprenticeship" approach ... clinical attachments felt as though you were part of the team and responsibility increases throughout the term ... being attached to a team in a clinical setting and being able to help the team ... the experiences gained while being part of a clinical team ... phase 3 has been very rewarding ... lots of patient interaction and real world learning."

The above comments lend support to the quantitative data indicating that year 5 students in Medicine-3802 appear to be having an improved clinical experience compared to year 5 students from the Medicine-3801 program.

- ***Generic Capabilities Development***

An explicit aim of the design of the new Medicine-3802 program is to explicitly develop a set of generic capabilities that will support the self-direction needed to optimise clinical learning in phase 3 and post-graduation. The open-ended comments lend some support to the view that students perceive they are developing these capabilities:

"I think the integration of different disciplines gives us the chance to use our problem solving skills early in the course ... encouragement to develop independent and critical thinking ... integration of all aspects of learning helps develop a critical and evaluative mindset ... development [of] a range of skills, eg teamwork, communication skills, through different aspects of the program ... although communication skills/ethics/public health tutorial are really boring in phase 1, I appreciate my learning experience as the knowledge I gained are relevant and applicable in phase 3. Please ignore our phase 1 complaints ... the 'self-direction' is at a good level ...the self-directed component is an important aspect of the course and has helped me to be more initiative in my own learning ... focus on the eight graduate capabilities to encourage development of a skilled doctor who can adapt to new experiences ... it makes us to always reflect on our learning and I personally find that a valuable exercise that has benefited my progress in learning ... collaborative work is beneficial for team work skills and group learning ... excellent for personal growth and development in the academic preparation ... the new course does a good job of balancing our need for medical science knowledge with

other skills expected of 21st century doctors like effective communication and teamwork."

The following comment from a year 5 student (cohort 1 of Medicine-3802) in the 'needs improvement' category is interesting:

"While self-directedness is a great idea, the faculty took this to an extreme, the opposite end of the spectrum from the old course's focus on spoon feeding. While I feel this is very appropriate and necessary teaching style (especially in later years) and has actually put our entire year in good stead (despite our incessant grumblings) for our future careers, too much emphasis is placed on this early on."

The 2007 UNSW-wide Student Satisfaction Survey included a number of items that explored students' perceptions of whether they were developing generic capabilities (attributes) during their degree program. As described in detail elsewhere, UNSW-MBBS students were significantly more positive than all UNSW students in their experience of generic attribute development. Taken together, these two pieces of evidence suggest that the aims of Medicine-3802 to develop generic capabilities may be succeeding.

- ***Independent Learning Project***

A *CEQuery* search using the term 'ILP' generated 7 comments under 'best aspects' and 75 under 'need improvement'. Specific comments have been forwarded to the Independent Learning Project (ILP) Committee for review. However, it is important to note that the comments in MedSEQ-2008 may largely represent the ILP experience of the first 2 cohorts who undertook the ILP. Following a 2006 evaluation of the ILP in which ~50% reported overall satisfaction with their experience, a number of improvements to that program were made.

- ***Basic Sciences and Public Health***

Some students commented on a desire for more basic sciences teaching in the program (see comments under the Program Design domain). In addition, there were numerous comments about the teaching and learning of public health. A *CEQuery* search using 'society and health' or 's and h' revealed 37 comments in the 'need improvement' category and none in the 'best aspects' category. For example:

"Phase 3 society and health was a waste of time, money and resources ... society and health actually deters people from going into public health ... society and health phase 2 needs a vast improvement ... a higher emphasis on biomedical teaching during phase 1, shortened blocks for society and health during phase 2 ... society and health needs more relevant clinical application ... society and health block needs to include far more basic and clinical sciences ... in phase 2, put some of the health maintenance content in society and health ... is it possible to break up society and health and slot it into the other 3 courses ... s&h should be integrated into the other 3 courses ... sh3 had many lectures with overlapping topics and often failed to provide learning objectives for the weekly focuses (information dump is a poor way for us to learn)."

Overall Conclusions from the MedSEQ-2008 Survey

1. Assessment – Students desire better information to be communicated about assessments, more consistent marking, and the provision of feedback on why they achieved particular grades. They desire greater support with assessment tasks. Students' experience of the assessment system remains a key negative in both 2006 and 2008, although there is evidence of improvement in student ratings especially in phase 1 and the year 1-3 cohorts.
2. Communication – Students desire better communication pathways with teachers and faculty about assessment expectations, important policies and information that affects their learning experience, and during transitions within the program.
3. Program Design – Many students clearly value the integrated nature of the program, but there is a significant group of students who prefer a more structured, discipline-based design. Although the quantitative data (and CATEI data – see pages 26-27) suggest that there have been improvements in many aspects of phase 1 since the initial 2 cohorts, there may be scope for additional improvement in scenario group session design. Despite these issues, students' experience of formal learning activities and learning environments are key positives of the program, as is the provision of excellent resources.
4. Sense of Community – Relationships between students and the communities which they form are key positives of the Medicine program. Vertical integration of students from different years in single learning groups is generally seen as a positive experience.
5. Teaching Quality – Students are expressing a desire for improvements in the skills of scenario group facilitators. There is also a strong view that many teachers are of excellent quality and practical classes are valued.
6. Clinical Learning – Students highly value learning in real-world clinical settings and there is multiple evidence that the student experience of clinical learning is a key positive of the program. There is preliminary evidence that students in Phase 3 of Medicine-3802 are having an improved experience compared to senior students in Medicine-3801.
7. Generic Capability Development – Combined with quantitative data from the 2007 UNSW Student Satisfaction Survey (see page 29), the MedSEQ-2008 student comments provide some evidence that students perceive that they are developing capabilities of teamwork, self-direction and critical analysis and that they recognise the value of these capabilities for clinical learning and professional practice.
8. Independent Learning Project – Student experiences of this new aspect of the Medicine program are variable with a significant number of negative experiences.
9. Curriculum Issues – There are a significant number of students expressing concerns about their experience of the Society and Health courses and how public health learning and teaching is occurring. Similarly, there are calls from students for review of the amount and structuring of biomedical sciences teaching. There are comments about the structure of phase 2 courses.

Course & Teaching Evaluation and Improvement (CATEI) Data

Phase 1 courses have been continuously evaluated since 2004. Aggregated data show that from the very first iteration of phase 1, students were very strongly positive in their ratings for opportunities for active participation in learning and collaboration (*Fig 23*). From 2004 to 2008, there has been an improvement in overall student satisfaction with phase 1 courses, albeit from a high starting point (*Fig 24*), and major improvement in items relating to assessment (*Fig 25*). Student perceptions of the provision of helpful feedback has been low, although there has been a significant improvement in this item in the past 2 years (*Fig 26*).

Figure 23 – Opportunities for Active Participation and Collaboration

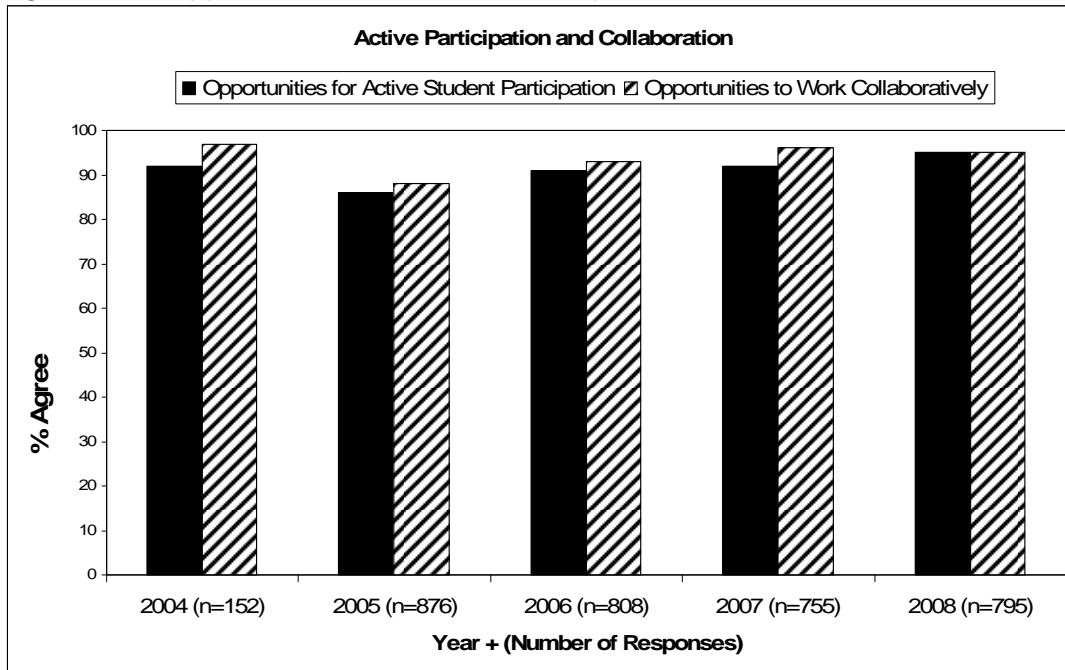


Figure 24 – Overall Satisfaction

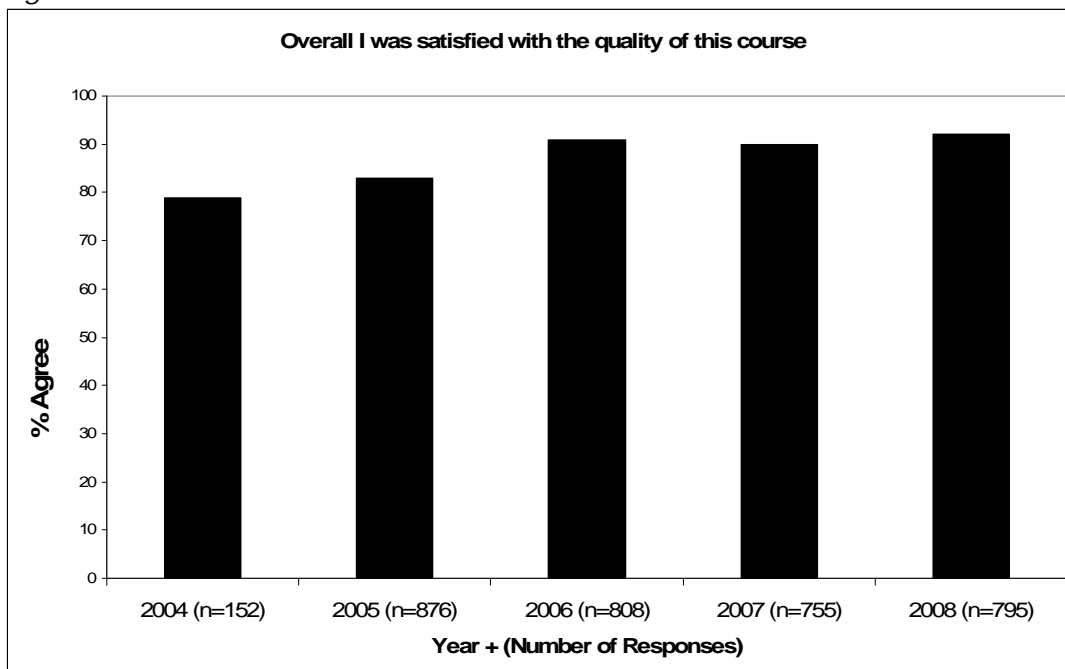


Figure 25 – Assessment in Phase 1 Courses

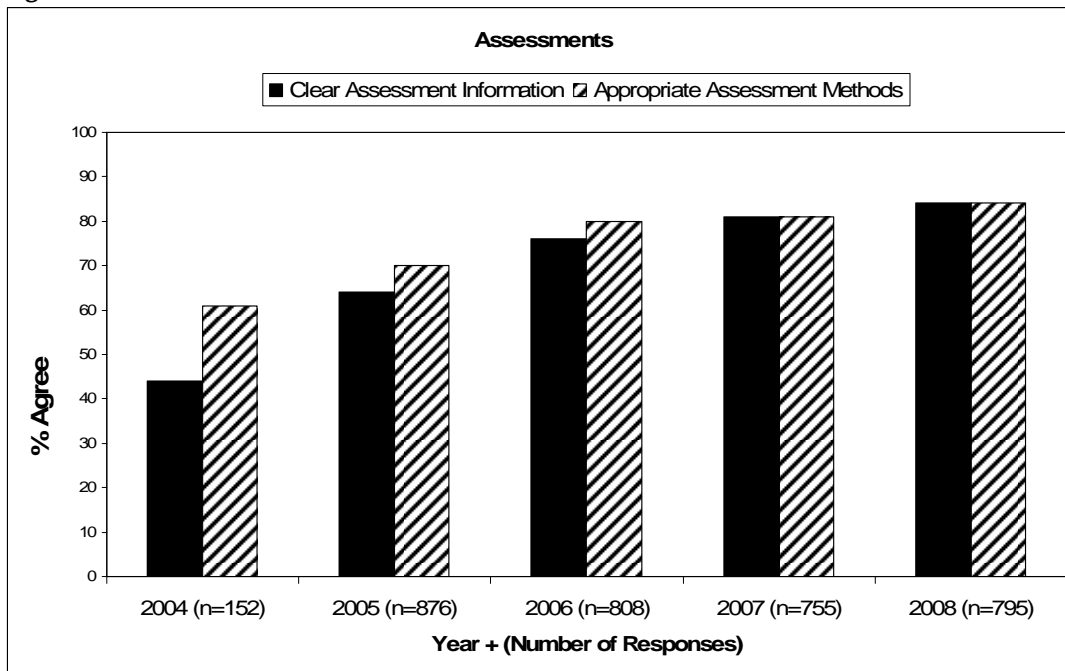
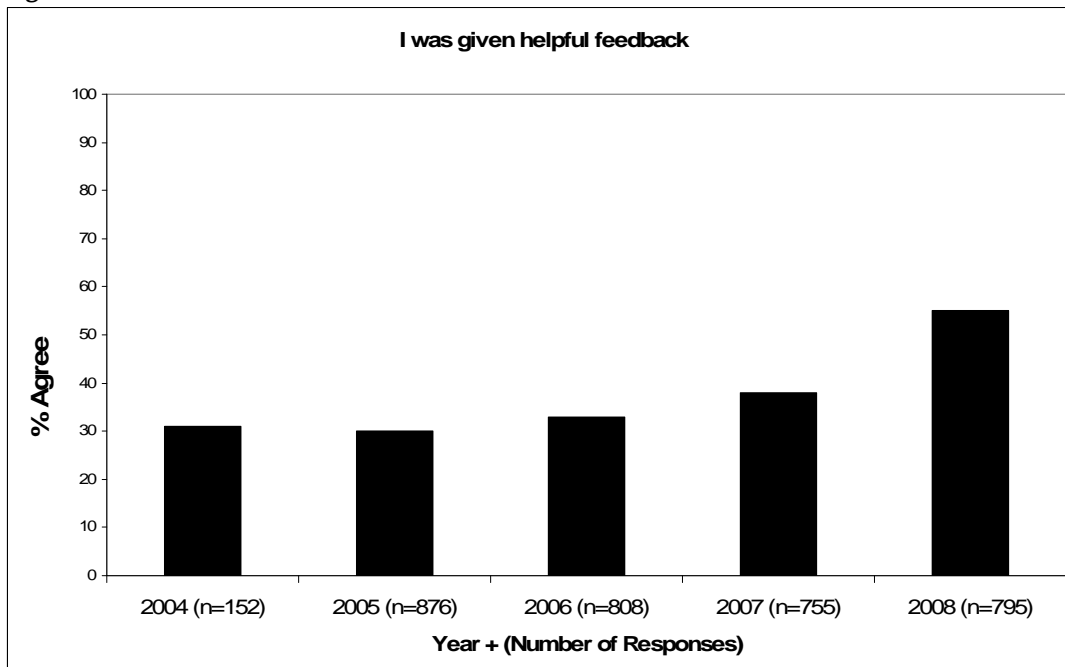
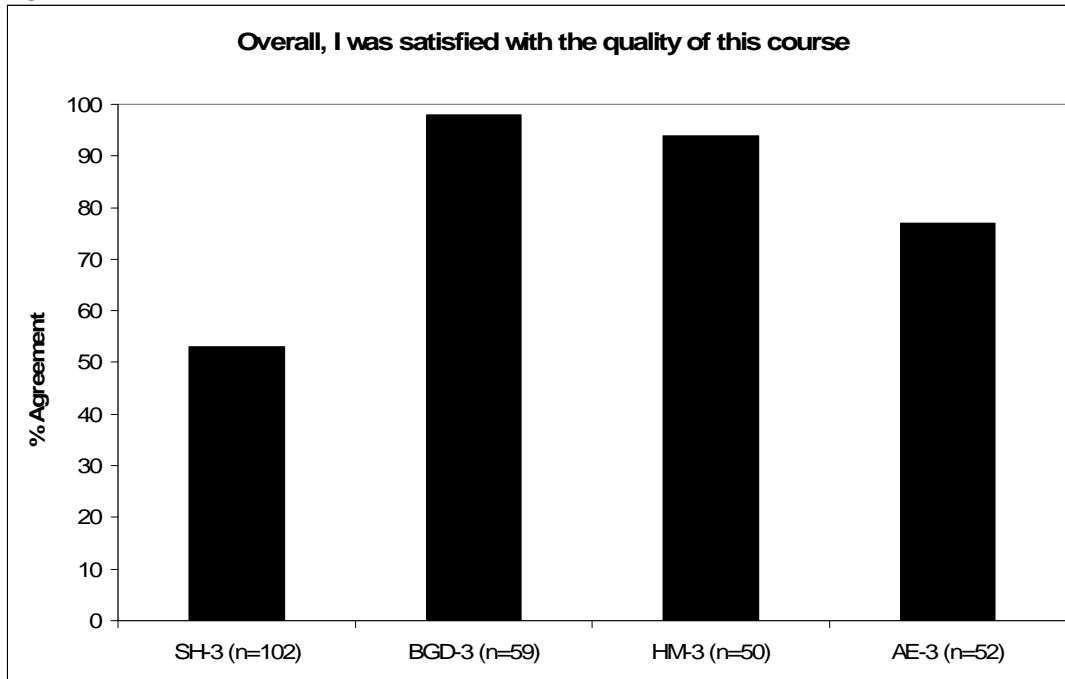


Figure 26 - Feedback



Data for CATEI evaluation of phase 2 courses is relatively limited to date. Of the four phase 2 courses, Society and Health-3 has been evaluated 5 times (once each in 2006 and 2007 and 3 times in 2008), Beginnings, Growth and Development-3 and Health Maintenance-3 have been evaluated 2 times (once each in 2007 and 2008, and 2006 and 2007 respectively), and Ageing and Endings-3 has been evaluated only once in 2006. The aggregated data for 'overall satisfaction' is shown in *figure 27*.

Figure 27 – Overall Satisfaction with Phase 2 Courses



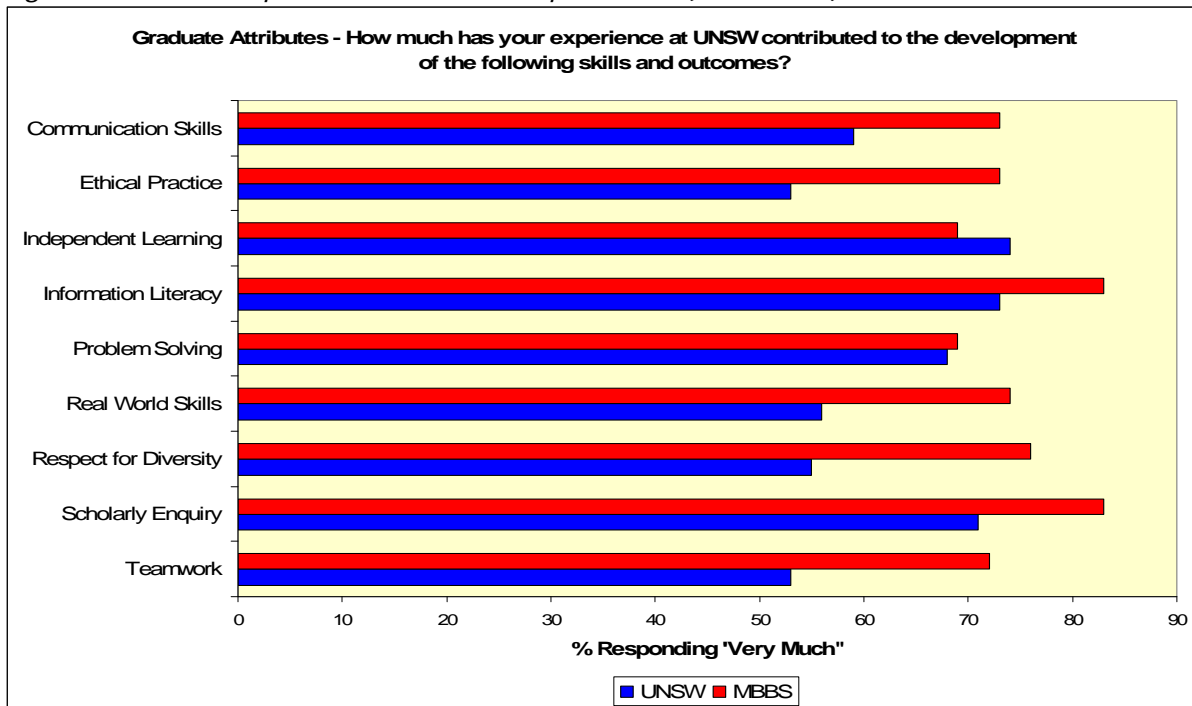
There is currently insufficient data from CATEI evaluations of phase 3 courses to report on.

The 2007 UNSW Student Satisfaction Survey

A large on-line survey was administered to all UNSW students in September 2007. A total of 5,464 students completed the survey of whom 265 students were enrolled in the Medicine-3802 or related programs. The survey explored multiple facets of the student experience of study at UNSW. In analysing the large amount of data available for this report, major differences were sought between ratings of Medicine-3802 students compared to UNSW students in general.

The stand-out area where significant differences between UNSW and MBBS-3802 students are apparent is in the development of generic attributes (capabilities). Within the survey, a set of 24 items asked students to reflect on their development of 9 generic graduate attributes (or capabilities) by rating 'how much has your experience at UNSW throughout your degree contributed to the development of the following skills and outcomes?'. The response used a 5-point scale of 'very much, quite a bit, some, very little or neutral'. As shown in *figure 28*, Medicine-3802 students were substantially more positive in rating 7 of these 9 aspects 'very much' compared to all UNSW students.

Figure 28 – Development of Generic Capabilities (Attributes)



Phase 1 Evaluation

The PEIG is currently undertaking an episodic evaluation of phase 1 using a qualitative methodology with focus groups of students and staff. To date 51 students have participated following a general invitation. The students have predominantly been current phase 1 students, although some phase 2 and 3 students participated to obtain their perceptions of the phase 1 experience and its utility in preparing them for subsequent clinical learning.

Participating staff (total 42 currently) have included scenario group facilitators, course convenors, and administrative staff. Additional focus groups with clinical teachers who have experience of Medicine-3801 and Medicine-3802 students are currently being conducted.

A number of key messages have emerged from focus groups with students and staff:

- ***Development of Generic Graduate Capabilities***

The following comments from participating students summarise the consensus view.

Presentation Skills

"we did so much presenting in phase 1 that if anyone asks us now to stand up in front of a group, we would all feel very confident ... as stupid as you feel in front of 15 of your fellow students, it's easier to learn in this environment than in front of a consultant."

Self-directed Learning

"everyone felt overwhelmed once we entered the hospital environment, but phase 1 gave a good ground work and a base from which to learn ... the good thing about phase 1 was that it taught us we would have to figure out a lot of stuff on our own. The whole self-directed learning thing was important ... I think that year 6 [3801] have a more solid foundation, but year 5 [3802] are more creative and autonomous, confident that if we don't know it we can work it out and I am satisfied with this ... self-directed learning structure was important and useful in phases 2 and 3."

Teamwork and Leadership

"the group projects were initially a nightmare, but comparing it to the last group project that we got done really quickly and we all worked really well together, the group work experience was really important in how to work together. It is very helpful to know how to work with other students now that I am in year 5 and a study group is essential ... a good group is much preferred to individual learning ... vertical integration was positive especially in the first year ... the 1st years, when they get the article, they read every word, and as 2nd years we had to tell them how to read the articles ... group work is not something that I enjoyed doing but it is good in getting skills in working with other people that are very useful for ILP."

Staff nominated the development of generic capabilities as an important function of scenario group sessions in phase 1.

Staff Comments

"I know that the ILP students are far better researchers, better at writing case reports and literature reviews than previous students ... there is huge variability between phase 3 students, [but] collectively they're pretty good in that they are autonomous ... they learn not to trust anything from a single source, they need to check 2 or 3 references."

Other important messages that emerged from staff focus groups was acknowledgement that the marking of assignments and projects is very time-consuming, but felt to be an important aspect of scenario group teaching. In addition, staff expressed a desire for greater levels of training and support for using the eMed-Teamwork system. The weekly facilitator meetings were strongly supported:

"the facilitator meetings are not just useful, they are crucial. If we expect the students to be reflective, the facilitators need a place that they can also be reflective ... this is my first time so the meetings were great."

- **Areas that Need Improvement - Students**

Self-directed Learning-Structured Teaching Balance

"not enough basic and clinical sciences ... the course was not as structured as it could have been ... when I look back, all my notes are mixed and I have to go through all my notes to find a case that relates to the information that I am looking for. The notes are not a resource because of the way the notes are structured ... scenario group learning is a very adult style of learning, but people coming straight from school are very young and have come from a spoon feeding environment. More guidance is needed ... the self-directed learning is good, but we probably needed more help in phase 1 on how to be self-directed ... overall the scenario group sessions were 50-60% productive ... overall, the course could cover a lot more given the amount of time we have in the course."

Teaching Quality

*"Training facilitators to provide more consistency across tutors ... the facilitator was not as interested as he could have been; he didn't create an environment where people were enthusiastic about teaching each other ...
... I had a good tutor with the communication tutorials and it was very important as I use the skills I learnt in phase 1 now – reflective listening, paraphrasing, and signposting."*

Other Issues

Students expressed a desire for more feedback on assessment results and the portfolio assessment is an issue that some students have problems with.

A more detailed analysis of the Phase 1 Evaluation will be subsequently provided to the Phase 1 Committee.

Survey of Phase 1 Practical Classes in 2005

A number of innovations were introduced into laboratory practical classes as part of Medicine-3802. These included the integration of the teaching of microscopic anatomy (histology) with pathology and the use of ICT solutions such as the 'virtual microscope'. In addition, because phase 1 involves students from years 1 and 2 participating in the same learning groups, including practical classes, these novel aspects of teaching and learning in phase 1 practical classes were evaluated in 2005.⁷

Data was collected from 365 of 445 phase 1 students (82% response). Included in the survey were items about the value of integration of normal and abnormal microscopic findings, and items about the students' experience of mixed (year 1 + 2) learning groups.

In response to the question, 'How is your learning affected by having both year 1 and year 2 students in the same practical class?', the following response was obtained.

Positive effect on learning	173 (50%)
No effect on learning	110 (32%)
Negative effect on learning	64 (18%)

This data supports student comments from MedSEQ-2008 that vertical mixing of students within learning groups is generally supported (page 20).

With respect to integration of histology and pathology, students were highly positive as can be seen from *figure 29*.

Figure 29 – Student Evaluations of Integrated Practical Classes (from Kumar et al.)

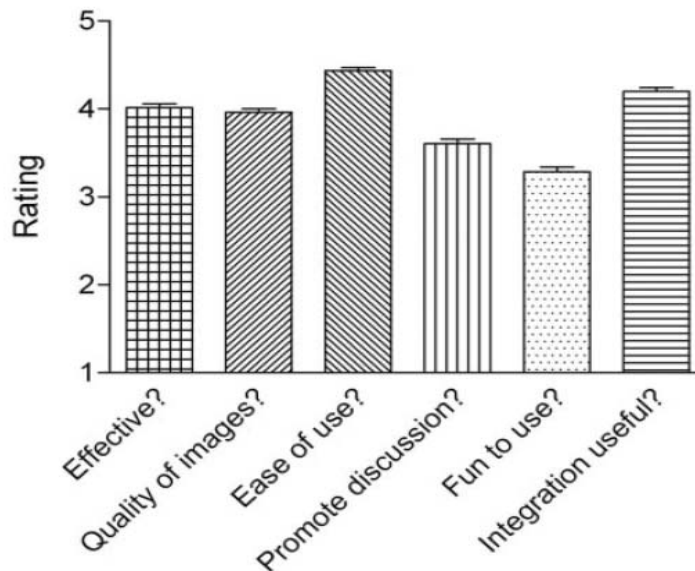


Figure 3. Student ratings of the use of virtual slides in the integrated practical classes (mean \pm SEM; n = 361-365 responses)

⁷ Kumar RK, Freeman B, Velan GM, De Permentier PJ. Integrating histology and histopathology teaching in practical classes using virtual slides. *Anatomical Record* 2006; 289B: 128-133

Overall Conclusions of the Student Experience of Medicine

Key positives of UNSW MBBS program

- Good resources are provided including ICT
- Effective learning environments including formal learning activities
- Student relationships seen as positive
- Clinical learning strongly valued and students' experience of clinical learning is improving
- Support for clinical learning provided and clinical teachers are seen as helpful
- Teaching quality generally considered good with caveats (see phase 1)
- Learning is effective for professional practice

Phase 1

- Evidence of improvement in a number of aspects from 2004 to 2008
- Significant support from students for the integrated nature of scenario-based learning + mixing of years in groups
- Nevertheless, some students prefer a more structured design
- Strong message that the selection, training and support of phase 1 facilitators needs improvement
- Desire for review of some scenario group session instructional design
- Desire for a curricular review including basic science content, sequencing/ structuring of content

Generic Capability Development

- Significant support from students and staff that the design of Med-3802 is effective for developing generic capabilities that are valuable for clinical learning
- Initial evidence that clinical learning in phase 3 (year 5 - Med3802) is a better experience than Med3801 possibly due to explicit generic capability development

Key negatives of UNSW MBBS program

- Assessment system needs improvements
 - Communication to students on assessment expectations
 - Consistency/standardisation of marking (especially in phase 2/3)
 - Feedback on assessment performance
 - Support for learning including assessment tasks
- Clarity of learning goals – improvements up to 2008
- Communication pathways with students need improving
- Better student support needed
 - Learning support (guidance, clinical difficulties)
 - Special circumstances, Transitions
- Feedback – ongoing issue for improvement, including on assessments but evidence of improvements in phase 1.

Recommendations

1. The integrated structure of Phase 1 should be retained as it is strongly valued by many students and staff, and initial data suggests it is successful in developing generic capabilities important for clinical and post-graduation learning.
2. Consideration be given to designing an alternative more structured science track Phase 1 experience for up to 60 MBBS students that could potentially involve a Science-Medicine (BSc,MB,BS) combined degree.
3. The Faculty allocate additional substantial resources to improve the selection, training and support for scenario group facilitators.
4. Curricular revisions to Phase 1 be integrated within a broader curriculum review (see recommendation 6).
5. Relevant Assessment Committees review student feedback and propose changes to improve:
 - communication about assessment expectations
 - feedback on assessment performance
 - training and calibration of examiners.
6. A broad curricular review of Phases 1 to 3 be undertaken by a working party established by the PEIG to report to the Curriculum Development Committee by November, 2009. The review should include the structure, amount and sequencing of biomedical sciences, public health, and clinical disciplinary content within courses, and the structure and number of courses in Phase 2.
7. The teaching and learning of public health in the Program be reviewed including the Phase 2 Society and Health-3 course and relevant disciplinary content across all 3 phases (see also recommendation 6).
8. The Independent Learning Project (ILP) be evaluated during 2010.
9. The MedSEQ be repeated in 2010.
10. Continuous evaluation and improvement processes continue including the CATEI process.
11. This report is disseminated widely to students and staff.