

**FACULTY OF ENGINEERING**  
**STUDENT RESEARCH EXPERIENCE QUESTIONNAIRE (SREQ)**  
**POSTGRADUATE RESEARCH STUDENTS**  
**ANALYSIS OF OPEN RESPONSE COMMENTS: 2005**

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## **EXECUTIVE SUMMARY**

The Student Research Experience Questionnaire (SREQ), which evaluates the quality of research higher degree students' experiences, was introduced in 2002. As part of the questionnaire students are asked to provide comments on the best aspects of their university experience and those that could be improved.

Based on the responses to these questions, this document seeks to provide an analysis of the areas of best practice, and opportunities for improvement, in the experiences of postgraduate research students in the Faculty of Engineering in 2005.

### **Degree experience: areas of best practice**

The aspects of degree experience which attracted most positive comments from postgraduate research students in 2005 were:

	% of comments received	
	2005	2004
Generic skills: working independently	25%	20%
Generic skills: graduate attributes	20%	22%
Quality of supervision: supervisor	20%	15%
Overall satisfaction: satisfaction with research	16%	13%
Research climate: supportive work environment	10%	4%
Generic skills: research skills	9%	9%

### **Degree experience: opportunities for improvement**

The areas of degree experience which postgraduate research students considered most in need of improvement in 2005 were:

	% of comments received	
	2005	2004
Quality of infrastructure: funding (not scholarships/ PRSS)	20%	17%
Quality of infrastructure: physical facilities: workspace, building, office	14%	22%
Quality of supervision: supervisor	14%	20%
Research climate: seminars/ workshops	9%	1%
Overall satisfaction: satisfaction with research	9%	
Administration and organisation: general comments	6%	5%

NB: Although comments regarding the quality of supervision: supervisor rate third in both the best aspects and aspects in need of improvement, it should be noted that the percentage of comments received on this aspect has reversed between 2004 and 2005. In 2004 15% of comments received noted that their supervisor was one of the best aspects, and 20% that this was an area in need of improvement. In 2005, 20% of comments received considered their supervisor to be one of the best aspects, and 14% an area in need of improvement.

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*June 2006*

## **1 Introduction**

The Student Research Experience Questionnaire (SREQ), which evaluates the quality of research higher degree students' experiences, was introduced in 2002. As part of the questionnaire postgraduate research students are asked to provide comments on the following:

- What are the best aspects of your research higher degree experience?
- What aspects are most in need of improvement?

Based on the responses to these questions, this document seeks to provide an analysis of the areas of best practice, and opportunities for improvement, in the experiences of postgraduate research students in the Faculty of Engineering in 2005.

In 2005 63% of students who responded to the SREQ provided comments on the best aspects of their degree experience, and 53% on aspects that were considered to be in need of improvement. The substantial difference in the number of positive comments received compared to those expressing the opposite opinion, possibly indicates an overall satisfaction with the degree experience of postgraduate research students in the Faculty of Engineering.

## **2 Arrangement**

1. Analysis of comments referring to best aspects of the degree course
2. Analysis of comments referring to aspects that could be improved

Within each section, responses are ranked according to the percentage of comments received for each aspect. Sample comments are provided for the six aspects that received the highest percentage of comments. For comparison, results for the previous years qualitative analysis (2002 – 2004) are provided in brackets after the 2005 results.

Only aspects that received more than 5% of comments in 2005 are included in this report. To preserve student confidentiality, sample comments are only provided if there are six or more comments relating to that aspect in the responses. Comments that may possibly identify the student are not been included in the sample comments. Comments are transcribed exactly as they appear in the original documents.

## **3 Analysis of the comments: taxonomy and process**

The manual analysis and evaluation method used by the University is based on an in-house taxonomy which allows for standardisation of reporting across the university and ease of comparison with the SREQ quantitative analysis reports. Within the taxonomy, categories used for the SREQ are identical to the SREQ factor scales, with the addition of Administration and organisation, Ethics Administration, Academic Board policies, International Office, and other administrative areas and support services. This taxonomy is under constant revision as the need to sub-divide categories and create new ones becomes apparent.

Each comment received is analysed according to the SREQ Taxonomy, with those including more than one aspect being counted in each aspect mentioned.

It should be noted, however, that the absence of favourable comments on a particular aspect of learning and teaching does not reflect that this is not an area of best practice. Rather that the students are happy with their experiences, and prefer to focus on commenting on areas in need of improvement.

#### **4 Analysis of comments referring to the best aspects<sup>1</sup>**

**Generic skills: working independently** (2005: 25%)  
(2004: 20%; 2003: 13%; 2002: 14%)

- I have learnt to work independently on deep research subjects without depending on other people.
- The best aspects of my research higher degree experience is that I have developed the ability to learn independently and plan my own work. This aspects have improved my problem solving ability and skills of how to organise own work well.
- Independent research experience, provides the opportunity to tackle a problem with unknown solution. Interdisciplinary research.
- Freedom to work without course material due dates. Freedom to work on an research what I love. Allows you to work at your own pace and manage your workload effectively.

**Generic skills: graduate attributes** (2005: 20%)  
(2004: 22%; 2003: 12%; 2002: 30%)

- The best aspects of my research experience are the development of analytical and problem solving skills and independent learning. Developing the analytical and problem solving skills are very important as it allows me to look at problems from different point of views and the satisfaction when a solution is found for a problem. Independent learning gives me the confidence to carry out successful research in areas where I am unfamiliar with
- Being able to fully utilise my analytical thinking abilities to solve a lot of problems. I believe it has enhanced my lateral thinking abilities.
- Lateral thinking - Broad project scope, not limited to experiments set by supervisor. Critical thinking - the opportunity to convince peers of valuable ideas, not a one way street
- The challenge of developing new skills everyday to understand and work with the different areas that make part of my project is by far the best aspect of my degree.

**Quality of supervision: supervisor** (2005: 20%)  
(2004: 15%; 2003: 18%; 2002: 11%)

- I am having the opportunity to be with one of the best research supervisors in my field and I find I am with a very supportive research group.
- Great support- My supervisor has a lot time for research students and is very approachable. Smaller research groups means more individual attention. I believe with the right supervision is crucial to post grad studies.
- I'm developing my own ideas proving if they work. I'm dealing with a highly prepared supervisor from whom I'm learning a lot about his method.
- Being to present your ideas to your supervisor and discuss about it. Literature review has provided in depth knowledge of my topic and I could arrange my own time accordingly.

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<sup>1</sup> Number of comment received: 2005: 96; 2004: 100; 2003: 99; 2002: 56

**Overall satisfaction: satisfaction with research** **(2005: 16%)**  
(2004: 13%; 2003: 23%; 2002: 20%)

- The ability to conduct my own research on a topic of my choice. And have the support to conduct this research in my own way and direction. These help me with motivation with my work and give me the urge to continue work.
- The best aspect is the close association between my research and the project work that I am associated with. This gives me ample opportunities to see applications of the work which I am performing.
- I enjoy the challenge and reward of research. I enjoy the lifestyle and mentality of doing research. I like the group I am in.
- Being able to work in an interesting field of research. It is the type of research that provides motivation to achieve a good result.

**Research climate: supportive work environment** **(2005: 10%)**  
(2004: 4%; 2003: 9%; 2002: 5%)

- An ideal research environment which one can have access 24/7 is created and smoothly run. I am fortunate I have the sharpest advisers to bring me to current important issues in the research world.
- Cooperation. Actually, I gained a lot of support and help from my colleagues, supervisor and department in my research. This enables me to overcome the difficulties I meet in the study.
- Community of researchers in residence enhances your experiences, gives guidance and fresh ideas and ensures you don't feel isolated. Facilities and technology are excellent.
- Support and advice is readily available from my supervisor and other academics within and outside the department.

**Generic skills: research skills** **(2005: 9%)**  
(2004: 9%; 2003: 5%; 2002: 9%)

- It has improved my oral skills, my writing skills, my analytical abilities and my interacting with other group members on a project. In my opinion this is what PhD aims to achieve. It lays the groundwork to do independent research in future. It helps to develop the sort of skills that is required of a researcher.
- Improving my writing skill, knowledge, problem solving and researching for information.
- in doing my research here, I know how to analysis the problem and handle the problem. This help me to further developed my research ability
- Communicating with others, improve my skills in research, expressing my ideas, understanding, collaborating with others and depending on my self confidence.

**Other aspects mentioned included:**

	<i>2005</i>	<i>2004</i>	<i>2003</i>	<i>2002</i>
Quality of infrastructure: physical facilities: workspace, buildings, office	9%	8%	9%	9%
Research climate: part of research community: general comments	7%	12%	9%	7%
Research climate: challenging, stimulating	6%	7%	3%	4%
Generic skills: expanding knowledge base	6%	4%	5%	4%

## **5 Analysis of comments suggesting improvements<sup>2</sup>**

**Quality of infrastructure: funding (not scholarships or PRSS) (2005: 20%)**  
(2004: 17%; 2003: 15%; 2002: 8%)

- Financial support to attend conferences. Even when the student gets a paper accepted for publication, it is extremely difficult to find the funds to register and attend the event.
- Adequate financial support to attend conferences is severely lacking. Especially if students are not receiving scholarships, more financial support should be provided by the university.
- More fund should be allocated for research. The school should have authority to exempt/reduce the tuition fee for international fee paying research student based on their research performance.
- Lack of industrial participation and financial support. There seems to be no expression of interest from the Industrial Sector to propose possible research topics or to collaboratively engage into academic research and its applications for the overall benefit of national and international technological development. No financial support comes out of these industrial organizations either.

**Quality of infrastructure: physical facilities: workspace, buildings, offices (2005: 14%)**  
(2004: 22%; 2003: 15%; 2002: 22%)

- Air-conditioning in the rooms I'm studying at University. Cold in the winter and far too hot in summer, hard to concentrate and work in such conditions.
- Research lab environment. My research lab is terrible, messy and unpleasant. Most of the things are old and torn. Really shocking.
- need a water cooler to supply drinking water in Elec. Engineering building (building J03)!!
- Lab environment need to improve because many people are in the same room. Sometimes noisy and can not concentrate and think deeply

**Quality of supervision: supervisor (2005: 14%)**  
(2004: 20%; 2003: 13%; 2002: 16%)

- Greater interest and direction from supervisor. The supervisor should take a greater role in developing the students research career rather than just the research project.
- Supervisor needs improvement. Has little time which is ok, but I feel that I am low on the priority list. More positive reinforcement is needed , less scare tactics.
- Supervisor arrangements. I feel dissatisfied with my supervisor. I think I am interested in topics more similar to the experience and expertise and interest of other supervisors in my group, as a result we are both uncontent. I feel I didn't put enough time into choosing my supervisor. It would be good if there was enough flexibility to choose a supervisor at the end of the first n-months (3?) of the postgraduate candidature.
- Basically I feel that being a research student also means one must become slave to the supervisor. I have brought this up in my reviews but it seems as though the university turns a blind eye to the over-use of capable research students to undertake far too much teaching and supervision of undergraduates. I feel that I have lost a lot of my own time in doing the job my supervisor should be doing. Meanwhile, my supervisors are very rarely available for me to talk with about the state of my research!

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<sup>2</sup> Number of comment received: 2005: 81; 2004: 88; 2003: 80; 2002: 50

**Research climate: seminars/ workshops**

(2005: 9%)

(2004: 1%; 2003: 4%; 2002: 2%)

- A better seminar program for postgraduate students. It provides a way to practice presenting your ideas and also provides a way to find out what all the other students are working on.
- Weekly departmental or group seminars would be good, especially more visiting academics.
- No group discussion/seminars due to no organisation inside lab. Even no one staff available at school in image direction.
- Seminar program is of poor quality and low attendance rate. Academics should be encouraged to give seminars of their research area instead of making this program students only.

**Overall satisfaction: satisfaction with research**

(2005: 9%)

(2003: 5%; 2002: 2%)

- I sometimes find this type of work quite isolating and I would love if my project had more connection with other similar projects.
- More help needed in doing literature research. Often I'm faced with the uncertainty of how to focus down which type of information if relevant to my topic.
- Writing in technical papers have led me to realise my English needs improvement. I also need to refine my experiment and analysis one at a time. I tend to do them in bulk and leave them for analysis all at one time. This leads to realization of data error way later.
- More useful and interesting research topics, rather than wasting your time producing worthless papers, which the majority of them are just published and then forgotten.

**Other aspects mentioned included:**

*NB: all the aspects mentioned below were mentioned in less than six comments*

	2005	2004	2003	2002
Administration and organisation: general comments	6%	5%	10%	4%
Research climate: integration into faculty/ department	6%			2%