

As part of the Professional Development Programme (Teaching) organised by CDTL, groups of participants work on research projects related to teaching and learning. This issue of CDTL Brief presents some findings from two PDP-T research projects completed in November 2002.

Excelling at Teaching *and* Research: A Preliminary Study of Best Practices

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Introduction

Ask many new faculty (defined as fresh from their PhD, and in the first 3–5 years of service) how their research is going, and most likely the answer will be that they have not been able to get much done because they have been concentrating on their teaching. In many of these cases, it is not that their teaching load is excessive, but rather that as new faculty, they feel an extra urgency to perform well. Since it is teaching, more so than research, that physically requires their attention almost immediately after they begin their appointment, they channel a large portion of their energy into excelling at it, often at the expense of their research.

This is in essence some of what Boice (2000) has observed himself in spending about 20 years studying the work patterns of new faculty in North American academic institutions. According to his figures, the norm for most new faculty tends to be: 6 hours/week actual teaching; 18–30 hours/week preparing lectures; 2–6 hours/week consultation. If this is true, then it is a sobering thought, given that on average we work (officially) about a 50-hour week, which does not leave much time for research, not to mention the other administrative duties that some of us have. One of Boice's claims is that most new faculty fall into this trap of being bogged down by teaching because they are guilty of 'immoderation' in their work.

Boice found that *only* 3–5% of new faculty perform exemplarily in both teaching *as well as* research (Boice, 2000). The others who do not perform in this fashion fail to do so not because of commitment or 'lack of expertise in his or her area of scholarship', but rather because they did not practise particular work habits. As a result of his work, he identifies several 'exemplars' that characterise this small percentage of 'quick starters'. These exemplars fall in the area of teaching, research and 'socialisation'¹ and are defined in terms of independent ratings of student approval of teaching, scholarly productivity and social approval from gate-keeping colleagues. In other words, these quick starters seemed to take a particular approach to their teaching

preparation and presentations, which also gave them enough time to work on and develop their research careers without compromising their teaching quality.

For teaching, the exemplars noted among the quick starters were:

- Waiting actively, instead of rushing into tasks (i.e. thinking first before just 'putting everything down on paper')
- Beginning before feeling ready (i.e. avoiding procrastination)
- Preparing for lectures in brief, regular sessions instead of binges at the cost of other important areas of work (e.g. writing)
- Stopping in timely fashion
- Moderating over-attachment to one's teaching² as well as overreaction to criticism
- Moderating negative thinking and strong emotions in one's self
- Letting others do some of the work for them as collaborators (e.g. experts giving lectures) and critics
- Moderating classroom incivilities—quick starters show how to moderate classroom incivilities—partly defined as students who arrive late, noisily, and persist in talking aloud when someone else has the floor—with simple strategies of openness, pacing and patience

In short, the 'quick starters' identified by Boice were more organised and efficient at dividing their time between research and teaching, were better at coping with stress, possessed more objective perspectives with regard to their own work, and reacted towards/managed students in a positive manner.

Boice's claim that academics were often lop-sided in the emphasis they placed on teaching, research and

1. Academic and non-academic interaction with other faculty members that furthers the productivity of the new faculty member (e.g. learning the culture, motivation, feedback).
2. This includes the amount of preparation spent on teaching (i.e. spending moderate amounts of time on preparation rather than what Boice calls "binges").

socialisation motivated us to conduct the following study, given that our personal experience as well as that of other colleagues recognised some truth in what he was saying. In this preliminary study, we set out to find out:

- The work habits of new faculty at NUS with regard to teaching (i.e. Are new faculty here guilty of the ‘immoderation’ in teaching preparation that Boice claims others elsewhere are?)
- New faculty’s perception of NUS students, and whether specific problems with regard to students exist
- The type of support that would make new faculty feel less isolated

The present study is a report of our findings.

Method

27 new faculty members participated in this study. The criteria for selection were: (a) the participants must have been at NUS for not more than 5 years, and (b) that this was their first academic position.

Materials and Procedure

A self-administered questionnaire was used. The questionnaire was designed with a mixture of multiple-choice, Likert-scale and open-ended questions. It contained a total of 19 questions. A concerted effort was made to keep the questionnaire brief so that the response rate could be raised. Following Boice’s findings and our own research imperatives, our questions focused on these main themes:

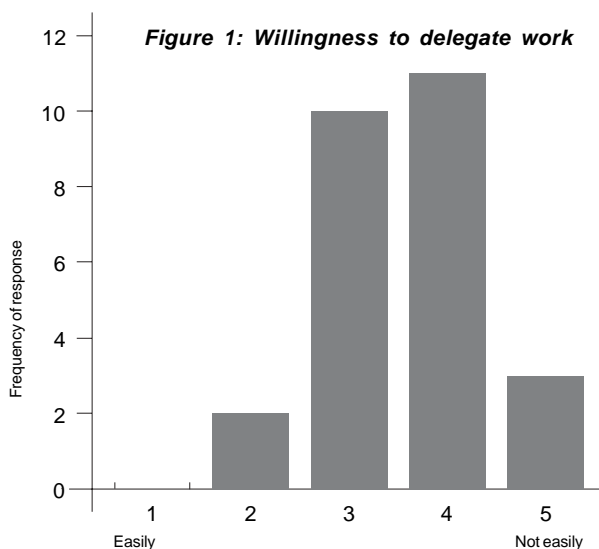
- Work habits with regard to preparation for teaching
- Perception of NUS students’ general attitude and their level of participation in class
- General emotional and mental state of new faculty, and their response to criticism of their teaching
- Interest in interaction with other new faculty
- Interest in having guidance in their initial years

The questionnaire was distributed through two main channels—CDTL’s Professional Development Programme Teaching Practicum (conducted during the first semester of AY 2002/2003) and via email for colleagues who had opted not to attend this practicum. A total of 27 completed questionnaires were received.

Results

Only some of our results are reported here, due to lack of space. Our study found that:

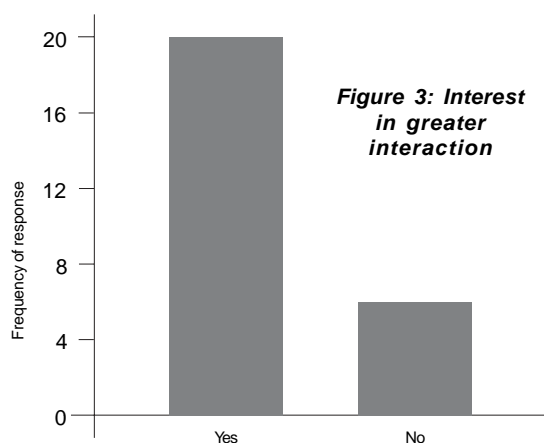
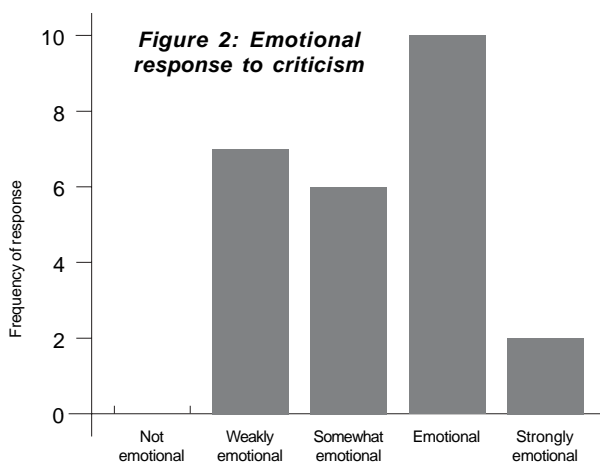
- New faculty’s work habits with regard to preparation for teaching
 - A majority (85%) prepared for lectures when their schedule allowed, rather than on the day before (13%)—i.e. few seemed to practise these ‘binges’.
 - The predominant mode of working was a combination of short and long periods (48%). Most (88%) veered towards a reluctance to delegate work.
 - Work load: See discussion below.



- New faculty’s perception of NUS students, and problems faced, if any
 - Most felt that the students were conscientious and hardworking, but tended to be too examination- and grade-oriented. The students were seen to prefer to be spoon-fed, and as a result, they performed well when given guidance but were not particularly aggressive or creative. This sentiment was encapsulated in one respondent’s statement: “Try to memorise instead of thinking and applying knowledge”.
 - In response to how NUS students compare to students whom they had taught elsewhere, many stated that our students are more passive and “need encouragement to be independent, take initiative and disagree”.
 - Many students are also unwilling to ask questions in class, and as a result, staff have to put in an extra effort to create a relaxed environment that is conducive for asking questions. However, the general feeling amongst respondents was that NUS students take their work more seriously than students from other countries.
- New faculty’s emotional and mental state
 - Many (63%) reported ups and downs rather than indifference (30%).
 - Many (67%) reported reacting strongly to criticism.
- New faculty’s interest in interaction with other new faculty
 - Many professed a high interest in this, and the preferred mode of interaction was through periodical social gatherings (61%) rather than through official ones (28%).
- New faculty’s interest in having guidance in their initial years
 - A majority (45%) expressed interest in a mentorship programme.

Discussion and recommendations

We can draw several conclusions from our questionnaire



as to how new faculty members at NUS compare to the ones studied by Boice. New faculty members at NUS have on average a teaching load of 8.5 hours/week (range: 2–16 hours/week) and thus show a similar teaching load as the faculty members studied by Boice (6–12 hours/week). However, NUS staff use much less time for preparation and work, a total of only 24.5 ± 10 hours/week (range: 5.5–42 hours/week) compared to 36–60 hours/week in Boice's study. This is shown clearly as well in: (a) the ratio of preparation of teaching material to actual teaching hours, which is 2.4 ± 2.2 (range: 0.3–10) compared to 3.6–5 in Boice's case; and (b) in the total working time spent on teaching, which is 40% for NUS staff and 45–75% for Boice (percentages were inferred from data given and assuming a working time of 80 hours/week). These numbers demonstrate that although new faculty members at NUS have similar teaching loads as other universities, they do not suffer from the symptoms described by Boice, namely spending too much time on teaching to the detriment of research activity. This is actually surprising since teaching is very much emphasised at the NUS.

Nevertheless, new faculty members at NUS are not perfect 'quick starters' and we identified by our questionnaire problems in other areas:

- New staff members feel emotional when criticised on research or teaching. This can lead to unwillingness in accepting criticism and it hinders teachers from evaluating their own performance objectively, as well as from changing and improving their teaching.

- There is a lack of willingness to delegate work to others. This leads to inefficient time management and possibly faculty spending time on issues that should be left to graduate students or technical staff.

Having identified these problem areas, there are several questions that should be studied in more detail:

- *Are these problems true only for new staff members or are they also valid for established members of staff who were not in the scope of this work?*

This question could be solved by another questionnaire to NUS faculty irrespective of their time of service.

- *Why do new staff members hesitate to delegate tasks?*

There are at least two possible explanations: new faculty are too strongly attached to their work—this would explain the emotional feelings towards criticism—or it could be a general lack of confidence in other co-workers.

- *How can this tendency to avoid delegation be reversed to optimise time management and efficiency?*

A lack of confidence in co-workers is often more an inability of new faculty to correctly judge which tasks can be fulfilled by somebody else or an unwillingness to invest time to explain a task which can be done more quickly by the new faculty member himself. If a group leader makes an effort, he can easily find out the capabilities of his co-workers and the initial investment of his working time usually saves time in the long run.

- *Can new staff members be taught to detach themselves emotionally from their work and take a more objective view of criticism (note that this should be the ideal model of a researcher and teacher)?*

Making this over-attachment clear to new faculty might already be the first step in helping them overcome this problem. In addition, videotaping lectures and reviewing the tapes under this aspect with fellow teachers might show new faculty their own strength and the strength of others in teaching. Such discussion might make it easier for new faculty in the future to accept criticism in at least the field of teaching.

Especially these last two questions should be discussed in context of the training of faculty provided by CDTL.

Finally, we would like to mention the possibility of improving the social interaction of new staff members in at least two respects:

- In the questionnaire, most participants indicated that they would like to see some form of mentorship, a programme already installed in some NUS faculties. Mentorship here is meant in the sense of an experienced staff member helping and explaining to new faculty about administrative duties and academic procedures at NUS through frequent meetings, especially right before important dates (e.g. deadline for university proposals, start of semester, start of exam periods). The mentor can also advise the new faculty on the quality of his performance and where improvement can be made. This mentorship programme is not meant as a scientific collaboration or a scientific advisory role for the mentor.

- Many new staff members would like to see some kind of periodical social gatherings to exchange experiences. Social gatherings can considerably enhance the motivation of new faculty by showing them that others experience similar problems in their starting years, thus putting initial problems in perspective.

In conclusion, new faculty at NUS have a similar teaching load as new faculty at other universities. Contrary to Boice's study, our study suggests that they seem to cope well with their duties and have enough time for research. However,

we have identified some problem areas in which new faculty at NUS do not perform well. These include strong emotionality when criticised and problems in delegating tasks. Both issues affect the efficiency (i.e. time management, teaching performance) of teachers, should be further studied, and could ultimately be included as seminars in the training of new faculty at the CDTL.

Bibliography

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Student Perceptions of Teachers, Courses and Classmates at NUS

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This paper is based on a project for the NUS Professional Development Programme. Members of the project group included Dr Hur Jung, Dr Elizabeth Maclachlan, Dr Eric C. Thompson, and A/Prof Eleanor Wong, all of whom contributed to the research and analysis.

Let's start with the good news: your students don't hate you. Or at least, NUS students don't hate their teachers in general. They think of them as friendly, approachable, helpful, knowledgeable, hardworking, interesting, dedicated, caring and patient. At worst, teachers are perceived as boring.

These findings are drawn from a survey of 202 NUS undergraduates from third-year courses in Economics, Sociology, Japanese Studies and Law conducted in October 2002. Data were collected (mostly via the Integrated Virtual Learning Environment) by asking students to free-list the perceived characteristics of NUS teachers, courses and students.

Free-listing is a method for collecting linguistic elements within a semantic domain. A free-listing task asks respondents to list all the words that come to mind to describe a particular type of thing (a domain). The main advantage of this method is to elicit 'emic' or insider terms from a particular group. The underlying theory of semantic domain analysis is that our perceptions of the world can only be given meaning through language, and therefore the content and structure of the stuff we have available to us (e.g. words) to describe a given type of thing has a significant bearing on how we think about that thing and our relationship to it.

This paper describes the structure and significance of three semantic domains in terms of what they suggest about how students relate to their teachers, classmates and courses. In addition, some interesting differences related to gender and talkativeness will be examined.

Characteristics of Teachers, Courses and Students

The structure of semantic domains can be represented and analysed in a number of ways. For this paper, we are simply going to look at the frequency of appearance and correspondence of meaning among the domain terms. Beyond the fact that the semantic domain used by students

to describe teachers at NUS is overwhelmingly positive, the structure has interesting characteristics. The terms in this domain appear to describe at least three important dimensions of the meaning of teachers to students, which we will call the supportive relationship dimension (Friendly, Approachable, Helpful, Caring, Patient), the intellectual dimension (Knowledgeable, Boring, Interesting), and the effort dimension (Hardworking, Dedicated) (*see Table 1*).

Perhaps the most striking aspect of the structure of this domain is that three terms, all in the supportive relationship dimension—Friendly, Approachable, Helpful—appear all at basically the same frequency (approximately 27.5%) and at a significantly higher frequency than other terms (18% or less). There also appear to be far more terms related to this dimension than to the intellectual and effort dimensions. One common interpretation of such data is that terms appearing most frequently in a domain are the most significant—i.e. they matter the most to members of the group. This would provide strong support to the claim that *what students care about most is the supportive relationship their teachers provide*. The intellect and effort of teachers are important, but clearly secondary to the supportive relationship. The intellectual dimension also appears to be slightly more significant than the effort dimension. Sadly, of the main things students perceive about teachers, the teacher's work and dedication are relatively low on the list.

The semantic domain students use to represent courses also appears to have at least three significant dimensions, which in this case we could call the interest dimension (Interesting, Boring, Fun), the challenge dimension (Difficult, Heavy, Tough, Demanding), and value dimension (Limited, Useful, Broad) (*see Table 2*). With regard to courses, the interest dimension far outweighs all other dimensions in the semantic domain. Interesting appears more often in students' lists (49%) than Boring (31.5%). But more importantly, this dimension as a whole is far more important

Table 1: Top Ten Characteristics of Teachers

Primary Terms	% All	%T1	%T2	%T3	%F	%M
1. Friendly	28	32	30	19	28	8.5
2. Approachable	27.5	31	28	23	29.5	24
3. Helpful	27	29	30	19	27	27
4. Knowledgeable	18	17	16	21	16	22
5. Boring	17	13	19	19	20	9.5
6. Hardworking	14	9	11	26	14	14
6. Interesting	14	13	20	7.5	7	14
8. Dedicated	11	9	11	13	14	3
9. Caring	9.5	12	11	5.5	9	9.5
10. Patient	9	11	5.5	11	9	8

Table 2: Top Ten Characteristics of Courses

Primary Terms	%All	%T1	%T2	%T3	%F	%M
1. Interesting	49	51	51	42.5	55	36
2. Boring	31.5	32	30	33	29.5	36
3. Difficult	18	23	13.5	17	17	19
4. Limited	11	9	8	15	11.5	9
5. Useful	10	11	9.5	9	9	11
6. Heavy	9	11	8	7	9	8
6. Tough	9	17	4	4	10	6
8. Demanding	6.5	4	5.5	11	6.5	6
8. Fun	6.5	7	3	11	5	9
10. Broad	6	5	4	9	7	3

Table 3: Top Ten Characteristics of Students

Primary Terms	%All	%T1	%T2	%T3	%F	%M
1. Hardworking	37	32.5	40.5	39	38	35
2. Friendly	17	21.5	15	15	18	16
3. Smart	12.5	17.5	11	7.5	10	17.5
4. Stressed	11.5	7	12	17	13	8
5. Lazy	11	7	13.5	13	12	8
6. Selfish	10.5	8	8	15	9	13
7. Helpful	8.5	9.5	11	4	7	11
7. Intelligent	8.5	4	9.5	13	8	9.5
7. <i>Kiasu</i>	8.5	11	9.5	4	9	8
10. Boring	7.5	3	13.5	5.5	5	13
10. Busy	7.5	9.5	8	4	10	1.5

Notes: %All = Percentage of All Respondents (n = 202); %T1 = Percentage of 'Less than Average Talkers' (n = 74); %T2 = Percentage of 'Average Talkers' (n = 74); %T3 = Percentage of 'More than Average Talkers' (n = 54); %F = Percentage of Female Respondents (n = 139); %M = Percentage of Male Respondents (n = 63).

to students than the challenge or value of courses. The challenge courses pose to students—whether they are Difficult, Heavy, Tough or Demanding—also appears more important than their value.

When students characterise themselves, the dimensions that appear significant are what we might classify as an effort dimension (Hardworking, Stressed, Lazy, Busy), a supportive relationship dimension (Friendly, Selfish, Helpful, Kiasu), and an intellectual dimension (Smart, Intelligent, Boring) (see Table 3). While the effort dimension (represented by Hardworking) appears to be the most significant of the three dimensions, followed by the supportive relationship dimension and the intellectual dimension, in this case the distinction in terms of which of these dimensions takes priority is not nearly as clear as it is with teachers and courses. The top three terms in this domain—Hardworking, Friendly, Smart—each comes from a different dimension of the overall domain.

Differences among Students

Data collected on gender and other characteristics of the respondents allows for some comparison among students. Although there are interesting differences, we should also keep in mind that there are also significant similarities among students. For example, while there are gender differences, the general dimensions of the characteristics of teachers, courses and students hold constant across gender. As a whole, for both male and female students, the supportive dimension of teachers and interest dimension of courses are of primary importance. Similarly, the effort dimension of student life is more significant than other dimensions for both females and males. Such similarities are important to keep in mind, as the gender differences are explored below.

Female students were twice as likely (20%) as males (9.5%) to use Boring to describe teachers. In contrast, male students were twice as likely (14%) as females (7%) to list Interesting as a characteristic of teachers. While this seems significant in itself, the finds get more intriguing when we see that females are much more likely (55%) than males (36%) to describe NUS courses as Interesting and slightly less likely (29.5%) than males (36%) to describe courses as Boring. To look at this data another way, males were about equally likely to list Interesting and Boring as characteristics of teachers and courses (though they use the terms more frequently with regard to courses). However, females were much more likely to describe teachers as Boring and courses as Interesting! It should be noted at the same time, that females listed the term, Dedicated, as a characteristic of teachers far more frequently than males.

Along with gender and other demographic characteristics, the survey asked students to rate themselves on a scale of 1 to 7 as to how often they 'speak up in class' (one idea of the survey being to examine factors that might affect class discussion). Based on these answers, students were classified into 'Less than Average Talkers' (T1 group), 'Average Talkers' (T2 group), and 'More than Average Talkers' (T3 group). Comparing these students' free lists reveals some interesting contrasts, suggesting differing expectations of their teachers and somewhat different perceptions of courses and students.

The most talkative T3 group places much more emphasis on the effort of teachers than other students, listing

Hardworking more frequently than any other characteristic. Conversely, the less talkative students place more emphasis on the supportive relationship of teachers and are much less likely to list Hardworking or Dedicated as characteristics of teachers. While students across all these groups use most of the same terms to describe courses, one notable contrast is that the least talkative students are more likely to characterise courses as Tough, whereas the most talkative students are more likely to characterise courses as Demanding.

With regard to students, the more talkative students again stress the effort dimension (Hardworking, Stressed, Lazy) while the less talkative students stress the supportive relationship dimension (Friendly, Helpful). Also of note, more and less talkative students appear to use different terms that carry similar meaning (Smart and Intelligent; Selfish and *Kiasu*). In these cases, less talkative students use the shorter and more colloquial terms, which might indicate a difference in their general comfort with the non-colloquial English of the classroom.

Discussion and Implications for Teaching

Keeping in mind that we are talking about a fairly simple analysis of a small sample, the data do suggest some implications for teaching practices and relationships between teachers and students. Teachers should be aware that in the classroom they are encountering something of a clash of cultures between themselves and their students. The classroom and university mean very different things to teachers and students.

While no parallel survey was carried out among teachers, it might be expected that NUS teachers would produce very differently structured semantic domains. If the small test-run done by the members of this research group is anything to go by, teachers would give much more weight to the effort and intellectual dimension when describing themselves and less—even much less—to the sort of terms which stress the supportive relationship with students. Judging by most conversations I have with colleagues, teachers see their jobs as a struggle to impart some sort of knowledge to their students. We have a strong sense of both our efforts and the intellectual dimension of the academic staff. And most of us probably would say that while it might be nice to be friendly to students, it is not our *job* to be friendly.

Be that as it may, this supportive dimension of our relationship with our students is what matters most to them, with the exception of a relatively small minority who are the most ‘talkative’ and engaged in the classes we teach. And even for them, the supportive relationship dimension is quite important. To be effective teachers, it might be our responsibility to take this into consideration as part of our job when providing a positive learning environment for students.

The differences between female and male students are a bit harder to interpret and to draw on for classroom practices. There are at least two interpretations (not necessarily mutually exclusive) of the gender differences found in the data. One is that the differences may have to do with gendered use of language. For instance, ‘Dedicated’ may simply be a word that women are more likely to use in general than men. Likewise, the more frequent use of ‘Interesting’ in describing courses may have to do with gendered differences in providing positive feedback.

Another interpretation is that these differences may reflect certain classroom dynamics. Is it the case that our female students, while enthusiastic about Interesting courses, are let down by Boring teachers? Is it that NUS teachers do not relate to and spark interest among female students as well as male students? This would seem to correspond to other classroom studies which have established that male students get called on more often in class and that teachers have a tendency to use techniques (e.g. metaphors and examples) that appeal more to the male experience than female experience. While the results of this survey cannot tell us exactly why we see this difference, it may be worth reflecting on why NUS teachers in general appear to bore their female students more than male students. Perhaps with some effort we can make ourselves as interesting as our courses. ■



The Centre for Development of Teaching and Learning (CDTL) engages in a wide range of activities to promote good teaching and learning at the National University of Singapore, including professional development, teaching and learning support, research on educational issues, and instructional design and development.

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