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Author(s)	Leslie Sharpe and S Gopinathan
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**FEEDING NIE :  
TEACHER FRIENDLY SCHOOLS AND  
TEACHER RECRUITMENT IN SINGAPORE**

LESLIE SHARPE  
S GOPINATHAN

Paper presented at the  
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Dr. Leslie Sharpe  
Dr. S. Gopinathan

National Institute of Education,  
Nanyang Technological University.

## **Feeding NIE : Teacher Friendly Schools and Teacher Recruitment in Singapore**

### **1. Introduction**

The issue of teacher recruitment is one that is of concern both to theorists of teacher education and to policy makers who depend on a regular supply of competent novice teachers to maintain standards and to be instruments of innovation. The research literature is, of course, voluminous on the topic of teacher recruitment and a number of research strands can be identified. One has to do with issues and concerns related to numbers, with the setting of recruitment targets, studies on teacher attrition, and consequences of demographic shifts. Often related to concerns with such issues are those that have to do with attaining a balanced sex ratio. Another research strand deals with entry qualifications, both in terms of academic qualifications and aptitude. ( Applegate J. H. 1987, Howey, K. R. and Strom, 1987). In the case of the former the concern is embedded in the fact that teaching does not attract the brightest candidates. Coupled with this is the recognition of the complexity of the teaching process which can only be met by novice teachers through more rigorous training and a need to insist on a thorough mastery of content i.e. on academic disciplines. The research strand that deals with aptitude springs from a recognition that qualities, not just of intellect but of character and personality are important variables in successful teaching ( Eng, 1983). This literature has looked at mechanisms for identifying those qualities and instruments for measuring them and their relation to effective teaching.

What seems missing, and which this small study deals with, is the school environment from which teacher recruits come. Are teacher recruits representative of the pupils they will teach and schools they will be posted to ? If the source for teacher supply is skewed, why does this occur ? What policy options are available if it is found that some schools are indeed richer sources of recruitment?

This study draws upon the insights of Kennedy (1991) who posits a case for teacher representativeness as a possible solution to problems of teaching difficult and slow learners. She notes that many of the problems of pedagogy and classroom management arise because teacher trainees are not representative of the pupils they teach. In some respects teachers represent successful learners, often from good schools who are quite unaware and unprepared for the educational environment of inner city or urban schools. A largely female dominated teaching force can be significantly ill equipped to deal with male dominated classrooms. Kennedy makes the further point that teachers not only teach content they personify it, and in a way that is representational. It is unclear if this would imply that a class of working class children learning science would, for instance, need to be taught by a biologist with a working class background but the point that pupils must be able to empathise with their teachers and see some reflection of themselves in them is valid. It should also be noted that, even if recruitment is

representative, teacher socialization at the institutional level could lead to homogenised outcomes arising from deeply held, often subconscious, beliefs about appropriate personality and behaviour attributes of teachers.

Following from Kennedy we have developed two concepts : that of "teacher-friendly" schools (TFS) and of "funnelling". A teacher-friendly school is defined as a school that is a source of a large number of recruits; the obverse is that there are non-teacher friendly schools which are either not sources for recruits or poor ones. The assumption is that if a larger number of schools can be made teacher-friendly the representativeness of teacher recruitment can be increased. This could be done if it was possible to identify the factors that made a school teacher-friendly. A related question is to see if these factors can be implanted or increased in other schools.

The concept of funnelling is an associated one. When one tracks the pathways into a training institution, a narrow band of feeder schools suggests a funnel effect. The narrower the funnel, the less the representatives.

## 2. The Singapore Context

Given that human resource development is accorded high priority in Singapore it is to be expected that quality teacher education would be regarded as an invaluable asset. Declines in population growth and an expanding and diversified economy have narrowed the pool of potential recruits into teaching in Singapore. One recent response has been to launch a BA/B.Sc. with Dip. Ed. programme to give pre-service teacher training degree status. This programme lays heavy stress on mastery of disciplinary content to ensure rigorous preparation for teaching. As with other countries Singapore is also experiencing severe gender imbalance, especially among primary school teachers.

Finally, the goal of ten years general education expressed in the Improving Primary School Education Report, and the introduction of the Normal (technical) course at the secondary level is going to mean that a wider ability range than hitherto will now be represented in secondary education. This will inevitably pose problems for classroom management and academic preparation.

## 3. Findings from the 1991 Study

In our paper, 'Feeding NIE : a Funnelling Effect in Recruitment', (Sharpe, L. & Gopinathan, S. 1991) we presented data showing that students admitted to the PGDE programme at NIE during July 1991 had been drawn from a relatively small number of schools. In order to explain what we termed a 'funnelling effect' in recruitment, we further hypothesized that schools supplying relatively large numbers of recruits might in some way be 'teacher friendly'. This paper is an update on these earlier findings. It is principally concerned with testing the concept of funnelling by analysing the schooling histories of students admitted to a wider range of NIE pre-service programmes in 1992.

#### 4. Comparison of 1991 and 1992 PGDE Cohorts

As the 1991 study was limited to PGDE students, it is appropriate to make comparisons firstly with the 1992 cohort of PGDE students, before going on to examine data for other pre-service courses as well.

##### 4.1 Feeder Primary Schools ( PGDE Programme )

Students from both the 1991 and 1992 cohorts were drawn from a large number of primary schools and were spread more or less equally amongst them, with one or two students drawn from each school. Only a handful of schools such as Raffles Girls', Methodist Girls' and Tanglin Primary supplied 5 or more students each.

##### 4.2 Feeder Secondary Schools ( PGDE Programme )

At secondary school level, the 1991 cohort was drawn from a total of 84 secondary schools ( 68 % of available secondary schools ). The 1992 cohort was drawn from 88 secondary schools ( 72 % of available schools ). Thus both the 1991 and 1992 PGDE cohorts were drawn from a large proportion of secondary schools. However, unlike at the primary level, students in both cohorts were found to be concentrated in a relatively few schools. As may be seen from Table 2, as many as 70 % of the 1991 cohort and 56% of the 1992 cohort were drawn from just 20 secondary schools. 5 schools alone contributed 31% of recruits in 1991 and 25 % in 1992.

TABLE 2

PERCENTAGE OF PGDE INTAKE FROM  
THE TOP FEEDER SCHOOLS

<u>INTAKE</u>	<u>TOP 20</u>	<u>TOP 10</u>	<u>TOP 5</u>
1991	70	50	31
1992	56	39	25

The pattern is essentially the same for the two cohorts, except that the concentration is less pronounced for the 1992 cohort.

#### 5. Top NIE Feeder Secondary schools for all Preservice Programmes

Taking the total pre-service cohort for 1992, students attended a total of 120 out of 131 available secondary schools. Though 92% of these available secondary schools supplied teacher recruits, some schools, as in the 1991 study, were found to supply relatively high numbers and others relatively low numbers of students. In fact, 20 out of a total of 131 secondary schools supplied 50% , 10 supplied 34% and 5 supplied 21 % of the

intake. Table 2 lists the top 10 schools.

TABLE 2

TOP TEN FEEDER SCHOOLS FOR  
ALL PRE-SERVICE PROGRAMMES

	<u>Name of School</u>	<u>Number of Students</u>	<u>Percentage</u>
1.	Crescent Girls'	61	6
2.	St. Nicholas Girls'	39	4
3.	Raffles Girls'	36	4
4.	Tanjong Katong Girls'	36	4
5.	Cedar Girls'	32	3
6.	Temasek Secondary	27	3
7.	CHIJ Secondary	25	3
8.	Dunman High	25	3
9.	Nanyang Girls'	23	2
10.	New Town Secondary	20	2

The figure of 10 schools supplying 34 % of the total intake is lower than that for the PGDE cohort alone, due to variations between the programmes. For example, whereas 50 % of the PGDE Primary cohort were drawn from just 10 schools, only 30% of the Dip.Ed. cohort were drawn from the same number of schools. Thus Dip.Ed. students are drawn from a larger number of secondary schools than their PGDE peers.

These variations in levels of concentration are even more pronounced for males in the sample. Whereas 45% of the total pre-service male cohort was drawn from 10 schools, this rises to 58 % for the PGDE programme alone, showing that 'A' level entrants tend to be supplied by a larger number of secondary schools than degree level entrants.

6. Feeder Pre-U Schools

In our 1991 paper we demonstrated that having been concentrated into a relatively few secondary schools, the PGDE sample was further concentrated at pre-U level. Table 3 shows much the same picture for the 1992 intake. Whereas in 1991 7 JCs produced 66%

of the PGDE cohort, in 1992 they produced 67%.

TABLE 3

FEEDER JUNIOR COLLEGES AND OTHER PRE-U SCHOOLS  
PGDE PROGRAMME 1992

	<u>Name of School</u>	<u>Number of Students</u>	<u>Percentage</u>
1.	Temasek	60	14
2.	National	57	13
3=	Raffles	36	8.5
3=	St. Andrew's	36	8.5
5=	Hwa Chong	33	8
5=	Anderson	33	8
7.	Anglo Chinese	30	7
8.	Nanyang	28	6.5
9.	Victoria	27	6
10.	Catholic	23	5
11.	Jurong	19	4
12.	Tampines	5	1
13.	Yishun	4	1
14.	Serangoon	0	0
	Pre-U Centres	37	8.5
	Unknown	5	1
	Total	438	100

Table 4 analyses the pre-U origins of Dip.Ed.Yr.1 students who entered NIE in 1992. It shows that almost a third of the intake was drawn from either secondary schools with Pre-U classes or from Centralized Institutes. With regard to the Junior Colleges, Table 4 is almost a perfect inversion of Table 3, showing that one group of colleges supplied students for the PGDE programme and another for the Dip. Ed. programme.

TABLE 4

**FEEDER JUNIOR COLLEGES AND OTHER PRE-U SCHOOLS  
DIP.ED.1. PROGRAMME 1992**

	<u>Name of School</u>	<u>Number of Students</u>	<u>Percentage</u>
1.	Yishun	41	14
2.	Nanyang	36	12
3.	Jurong	28	9
4.	Anglo-Chinese	20	7
5.	Tampines	18	6
6.	St. Andrew's	17	6
7.	Catholic	15	5
8.	Anderson	10	3
9.	Temasek	8	3
10.	Serangoon	6	2
11.	Hwa Chong	4	1
12.	National	3	1
13.	Raffles	1	0
14.	Victoria	1	0
	Pre-U Centres	92	31
	Unknown	3	
	Total	303	100

## 7. Discussion

The evidence presented clearly shows a funnelling effect, which is most pronounced for the PGDE programme. We should like to examine three possible explanations for this :

- (a) competition and selection
- (b) the large proportion of female recruits
- (c) the notion of " teacher friendly " schools.

### 7(a) **Competition and Selection**

It is clear from the data that the high level of competition and selection in secondary schooling play a part in explaining the concentration of NIE recruits into a relatively few secondary schools. Well-known schools, which were ranked highly in the recent "Straits Times Schools 100" league tables, feature prominently in the tables produced earlier. This is especially so for the PGDE students, who also had attended the more established junior colleges as well.

### 7(b) **Gender**

Given that females outnumbered males by over 3:1 in the 1992 intake, it is not surprising that the well-known girls' schools turned out to be major suppliers of NIE student teachers. Thus, it is to be expected that schools such as Crescent Girls', St. Nicholas Girls' and Raffles Girls' supplied large numbers of NIE recruits in both 1991 and 1992.

### 7(c) **Teacher Friendly Schools**

Though selection and gender obviously have a part to play in explaining the funnelling effect that we have identified they are insufficient explanations. They cannot by themselves explain, for example, why Crescent Girls' should supply a total of 61 students, or 6 % of the entire NIE intake for 1992. Neither can they explain why schools such as Temasek and New Town, both of which are mixed, government schools, should produce so many NIE recruits. In an attempt to explain these findings we have coined the term "teacher friendly" schools, that is schools which produce more than an expected number of NIE recruits.

In order to test the teacher friendly hypothesis there is a need to take into account the size of schools. It might simply be that those schools supplying large numbers of students are simply larger schools. In order to do this, we have taken enrolment numbers for Sec 4 (Special/Express) as published in the "ST Schools 100" . The number of NIE recruits is then expressed as a percentage of enrolment. Table 5 presents this information.

TABLE 5

TOP TEN FEEDER SCHOOLS FOR  
ALL PRE-SERVICE PROGRAMMES

	<u>Name of School</u>	<u>Number of Students</u>	<u>Percent*</u>
1.	Crescent Girls'	61/360	17
2.	Cedar Girls'	32/276	11.5
3=.	St. Nicholas Girls'	39/354	11
3=.	Tanjong Katong Girls'	36/327	11
5.	Katong Convent	18/186	9.5
6.	St. Margaret's	19/214	9
6.	CHIJ Secondary	25/301	8.5
7.	Raffles Girls'	36/445	8
8.	Temasek Secondary	27/352	7.5
9=.	Nanyang Girls'	23/320	7
9=	Singapore Chinese Girls'	13/190	7
9=	St. Teresa's Convent	9/124	7
12.	Dunman High	25/426	6
	New Town Secondary	20/ **	**

\* the percentage is calculated by dividing the number of NIE students divided by the enrolment into Secondary 4.

\*\* only normal stream enrolment information was published in the Straits Times 100 survey.

It is clear from Table 4 that when size of school is taken into account, the top feeder schools tend to be well-known government and government-aided girls' schools. Gender is clearly an important factor in the funnelling process. However, Crescent Girls' stands out from the other girls' schools, sending as many as 17% of its express students to NIE. This is twice the number supplied by Raffles Girls', Nanyang Girls' and Singapore Chinese Girls'.

The academic standing of top feeder schools is also important. Indeed, all of the schools in Table 5 are listed in the Top 50 Express/Special school list of the ST Schools 100 survey. However, Temasek stands out as an interesting case. This is

firstly because it is one of only two government mixed schools in the table and secondly because it supplied NIE with a much larger proportion of Express students than did other similar schools with similar ranks. In fact, Temasek supplied 27 students, or almost 8% of its Express pupils. This compares with Swiss Cottage which supplied 5 students, or 3% of its Express students; Clementi Town 12 (4%); Mayflower 13 (3%), Nan Hua 5 (2%); Jurong Secondary 2 (1%); and Zhonghua with none at all. New Town also stands out as an interesting case. A mixed government school, it was listed 4th in Top 50 Normal school list, yet it supplied 20 students to NIE.

We have singled out these schools because they supplied NIE with many more recruits than schools very much like themselves in terms of gender and academic standing. There are a number of other schools which we have not named which merit further attention. To explain this phenomenon we have coined the term 'teacher friendly' and are now in a position to hypothesize that these schools acted as an independent influence on students' decisions to become teachers. That is to say that some, as yet unknown, aspects of the school as an organisation were an important influence in propelling students into the teaching profession.

## 8. Conclusion

At this stage in the project, we feel that we have sufficient evidence to merit further study into both the concepts of funnelling and teacher-friendly schools. This further research might involve :

- (i) studies of future pre-service intakes to test further the concept of funnelling
- (ii) an analysis of student questionnaire data, already collected at entry, which will provide information on choice of teaching as a career, such as the age at which students remember having opted for teaching as a possible career, the people they remember as having influenced their choice, as well as their perceptions of the status of teaching in Singapore.
- (iii) a study of schools identified as being teacher-friendly. Initially this could involve interviews with principals, but might extend to a survey of pupils' and teachers' views. Comparisons might then be made between 'teacher-friendly' and 'teacher-unfriendly' schools.

The idea that individual schools can exert an independent influence on educational outcomes is not new. This has been the major finding of effective school research over the last decade or so. That schools might also exert an independent influence over and above outcomes such as educational attainment and delinquency rates is also not new. It accords with the popular adage in Singapore that some schools produce people to rule

Singapore, others to pay for Singapore, and others to pray for Singapore. Our suggestion is that yet other schools appear to produce people to teach for Singapore. However, even a cursory reading of the effective school literature shows that the identification of relationships between school organisational variables and outcomes is a complex and time-consuming matter. The basic patterns identified in this paper are clearly only a small beginning, but hopefully open up an original and worthwhile research area in the field of teacher education.

### References

1. Applegate, Jane H. (1987) Teacher Candidate Selection: An Overview Journal of Teacher Education, March-April, 2-6.
2. Dainton, Lord (1989) Higher Education in Singapore (mimeo)
3. Eng Soo Peck et al (1983) Feasibility of the MTAI as a selection instrument for pre-service teacher education - a pilot project. Singapore Journal of Education, 5(2) 20-42.
4. Howey, Kenneth R., and Sharon M. Strom (1987) Teacher Selection reconsidered. In Haberman, Martin & Julie M. Backus. (eds.) Advances in Teacher Education, 3, 1-34.
5. Kennedy, M. M. Policy Issues in Teacher Education, Phi Delta Kappan, May 1991.
6. Ministry of Education (1991) Improving Primary School Education.
7. Seet Ai Mee et al (1990) Teacher Training in the 1990s: Issues and Strategies. Singapore: Ministry of Education.
8. Sharpe, L. & Gopinathan, S. (1991) Feeding NIE : a Funnelling Effect in Recruitment.

Dr. Leslie Sharpe  
Dr. S. Gopinathan

National Institute of Education,  
Nanyang Technological Univeristy.  
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## 2. The Singapore Context

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## 3. Findings from the 1991 Study