
Title	Pedagogical practices to engage trainee teachers
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Source	<i>ERAS Conference, Singapore, 24-26 November 2004</i>
Organised by	Educational Research Association of Singapore (ERAS)

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Pedagogical Practices To Engage Trainee Teachers

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Introduction

As part of the new NTU's New Undergraduate Experience in 2003, a survey was carried out on all the new undergraduates and trainee teachers admitted to NTU and NIE in July 2003 on their profile and learning preferences. For this paper, I shall just focus on NIE trainees.

The survey was initiated as the President of NTU was interested in finding out whether the teaching styles practised by the faculty match the learning styles and needs of the undergraduates of the University.

Methodology

A questionnaire was administered to the new cohort of Degree, Diploma and Postgraduate Diploma trainees when they join the Institute of Education in July 2003. NIE faculty was also invited to participate in a corresponding survey to find out their teaching practices and to compare a match between trainees' preferred learning styles and faculty's teaching styles.

The key questions focused on trainees' learning preferences, study habits, needed learning supports and preferred characteristics of lecturers. For the lecturers, data on their teaching styles and their perceived ideal characteristics of lecturers were gathered. As the number of participants ran into thousands, the multiple choice format was employed.

A second survey was carried out on the Postgraduate Diploma trainees before they graduated in May 2004.

Results And Discussion

Table 1 presents the number of participants according to programme. The percentage of participants for each programme was about 80% and for faculty, about 33%.

The distribution of participants according to nationality is shown in Table 2 to show participants' familiarity with local education conditions. For each programme, about 90% of participants were Singapore Citizens.

Table 1
Number Of Year 1 Participants

	SURVEY 1				SURVEY 2	
	Degree	Dip. Ed.	PGDE (P)	PGDE (S)	PGDE (P&S)	NIE Lecturer
No.	97	270	221	694	924	135

Table 2
Distribution Of Participants By Nationality

NAT.	Degree	Dip. Ed.	PGDE (P)	PGDE (S)
Sing.	94(96.9%)	260(96.3%)	203(91.9%)	653(94.1%)
Sin. PR	2(2.1%)	3(1.1%)	7(3.1%)	27(3.9%)
Others	1(1.0%)	7(2.6%)	11(5.0%)	14(2.0%)

Table 3
NIE Trainees' Learning Preferences (in percentage)

Trainees' Learning Preferences	Programme					Lecturers' Teaching Preferences
	DipEd Yr1	BA/BSc Yr 1	PGDE (S)	PGDE (P)	PGDE (2nd Survey)	
Mass lecture	14.3	12.4	13.5	13.6	44.9	9.4
Small class	42.6	53.6	40.9	41.2	70.1	69.9
Tutorial	68.3	68.0	57.9	59.7	85.1	80.7
Lab work	23.6	12.4	19.3	24.9	53.4	20.2
Field trips	26.7	19.6	23.2	19.9	69.6	5.4
Practicum	35.3	26.8	40.9	38.9	74.4	6.5
Online	9.3	5.2	10.1	9.0	29.9	2.3
Using AV	15.5	13.4	14.4	11.3	40.8	7.4
Library	18.2	17.5	16.1	16.7	35.4	Not available
Study groups	29.8	29.9	26.8	29.8	54.4	NA
Surfing	19.8	12.4	12.5	19.8	41.6	NA
Others	0.4	1.0	0.6	0.9	0.5	NA

The hot favourites with trainees across programmes were small group tutorials, small class lecture, practicum and study group with classmates. Lecturers' choices corresponded with their trainees on two items, small class lectures and small class tutorials. Faculty did not feel that they could teach their trainees much during practicum as the meetings with their supervisors were limited to two or three.

Post-practicum feedback from trainees always rates practicum as the most relevant and beneficial of all their learning experiences during their training.

What were the least popular teaching methods with the trainees? In recent years, on-line teaching and learning is strongly promoted and recommended to be adopted for teaching at higher institutions. However, online-delivery ranked the lowest among all the suggested teaching/learning styles. The participants here had just left their Junior Colleges, Polytechnics and Universities and on-line delivery was no novelty to them. Yet they were not keen to have on-line delivery. On the other hand, part-time students, Master's and doctoral students and distance learners are enthusiastic about on-line learning. On-line delivery saves them travel time and time away from their work and family.

There could be a couple of reasons for the lack of enthusiasm for the education trainees. From their favour for small group tutorials, small class lectures and small study group with classmates, it is a strong indication that they preferred face-to-face interpersonal interaction and exchanges. Their low ratings for mass lectures and on-line delivery indicated their dislike for impersonal and non-interactive learning. On the whole, participating faculty has also given a thumbs-down on on-line delivery. However, some of lecturers I have spoken to found on-line delivery "neat and convenient" for them.

Education is a social process. Values, warmth, eye-contact, flexibility, body language, metacognitive skills and thinking are too complex to be captured on a two-dimensional screen. However, trainees were not averse to having supplementary materials and discussion forums on-line. But they preferred not to have formal face to face lesson replaced by an unemotional and an impersonal computer screen.

A comparison of the PDGE trainees at admission and at the end of the programme showed an up-surge of rating for all the suggested learning/teaching practices inclusive of on-line delivery even though it still ranked the lowest of the pile. After a year of the programme and practicum in school, the trainees have found teaching methodologies in school no longer correspond to their own school experiences. Lab work, workshop, field trips, AVA and surfing the net for information were all an important part of their teaching and assignment requirement. Their original favourites still retained their high ranking showing their strong belief in interpersonal interactions in learning.

From Table 4, the difference in experience and needs of participants began to show up between the programmes. However there were still some study habits more popular across the programmes than others. Small group discussion still ranked top among the programmes followed by participating in learning games. Field work/practicum and participating in simulation or role-play were favoured by a high percentage of the participants from each programme especially the post graduate diploma trainees. It is notable that Diploma trainees were enthusiastic about being given facts and theories in class and being given practice on computer software. The other programmes ranked practice on computer software rather lowly. On the other hand, teaching and tertiary study experiences have prepared the Postgraduate diploma trainees for analysis of data, exercises on hypothetical problems and seminars by classmates.

The data again indicated a preference for close interaction, practical and active learning. There is an apparent decline in all items for the PGDE trainees at the end of the programme.

Table 4
NIE Trainees' Preferred Study Habits (in percentage)

Study Habits	DipEd Yr1	BA/BSc Yr1	PGDE (P)	PGDE (S)	PGDE (2 nd Survey)
Group discussion	85.7	83.6	88.3	83.5	81.3
Getting facts & theories in class	77.4	65	67.9	61.8	49.9
Getting reading on selected topics for assignment	61.9	55.7	61.5	53.6	44.6
Lab work to verify theories	58.6	43.3	68.8	47.4	35.4
Exercises on numerical or hypothetical problems	43.7	45.4	61.6	52.4	30.3
Participating in learning games	75.3	82.5	89.6	81.9	78.7
Analyzing data, information	59.3	57.7	64.3	67.4	38.2
Field Work, practicum	68.2	69	77.4	79.1	58.3
Participating in simulations or role-plays	69.6	68	70.6	67.1	53.4
Attending seminars by classmates	44.1	47.5	52.9	57.9	27.3
Drill or practice on computer software	65.5	33.4	43.1	46.4	21.3
Instructor demonstrating an experiment or skills	71.1	62.8	73.8	64.4	42.1
Case Study	63.8	54.6	67.4	66.1	39.3

Face to face consultation with lecturers, study groups and assignments/projects of seniors were favourites of all the programmes. As the Diploma and Degree trainees are required to take written examination for their course modules, past examination papers are important to them. Once again, there is strong affirmation of trainees' need for personal attention and assurance from the lecturers and peers.

Unlike study habits, there is an upward surge for most learning needs in the post programme survey with the Postgraduate diploma trainees. The Post-Graduate Diploma Programme spans from July to May with barely twenty weeks for course modules and assignments. Hence the need for additional learning supports was strongly felt by these

trainees. On-line consultation with lectures saw a jump of 20%. Need to use the library over the weekend also soared by 25%. Trainees realized the effective use of relevant teaching aids to enhance a lesson during practicum. Hence there was a 30% shot to 62.9% for the need of video tapes, audio tapes and other learning aids.

Table 5
Learning Supports Needed By NIE Trainees (in percentage)

Learning Needs	DipEd Yr1	BA/BSc Yr1	PGDE (P)	PGDE (S)	PGDE (2 nd Survey)
Face to face consultation with lecturers	74.8	81.4	74.7	70.8	79.8
On-line consultation with lecturers	31.8	39.2	48	43.2	66.2
Library till late in the evening	33.3	43.3	50.3	43.1	59.8
Library over the weekend	24.4	16.5	26.7	24.8	50.8
Computerized instructional materials	33.0	28.9	40.7	40.8	68.1
Video tapes, audio tapes & other learning aids	30.8	78.6	31.3	35.6	62.9
Study groups	55.2	64	59.7	62.3	60.9
Sample assignments/projects of seniors	76.3	76.3	69.3	61.0	68.1
Past exam papers	78.9	78.4	31.7	29.1	34.1
Courses in communication skills/study skills	28.5	29.9	35.3	38.9	47.2

Trainees' preferred characteristics of an ideal lecturer concurred across programmes:

- Clear systematic presentation
- Knows the subject
- Is organized and well-prepared
- Stimulates thinking
- Patient and approachable
- Has a sense of humor

Lecturers' choice of the ideal characteristics of a lecturer concurred with the trainees on the professional and classroom behavior. The affective characteristics did not seem to be important to the lecturers but trainees preferred a more attentive, empathetic and humorous lecturer. New PDGE trainees did not realize the use of relevant examples as important for their course modules and practicum. After a year of lessons and practicum,

the trainees realized the importance and need for relevant examples in their lessons as these would help them cope with their encounters in school.

Table 6
NIE Trainees' Preferred Characteristics Of Lecturers (in percentage)

Lecturer Characteristics	DipEd Yr1	BA/BSc Yr 1	PGDE (S)	PGDE (P)	PGDE (2 nd Survey)	Lecturers
Clear systematic presentation	43.0	44.3	41.9	44.3	79.7	53.4
Knows the subject	42.6	39.2	35.0	42.5	83.8	49.1
Stimulates thinking	32.6	23.7	39.5	37.1	78.7	45.7
Use relevant examples	22.1	12.4	22.5	24.9	84.8	13.6
Is organized and well prepared	40.3	27.8	32.9	39.4	81.5	23.3
Good classroom management	17.8	7.2	9.7	8.6	35.9	2.0
Patient and approachable	34.5	37.1	25.4	21.7	58.6	11.6
Has a sense of humor	24.	20.6	26.5	22.6	61.3	3.1
Available outside class	15.5	12.4	9.5	7.7	34.7	2.3
Others	1.6	0.0	1.2	0.0	1.0	1.4

Implications For Teacher Education

From the survey, trainees across the programmes show a preference for

1. interactive tutorial style of teaching
2. group work with opportunities for exchanges and discussion with peers
3. lessons infused with learning games and active role-play
4. face to face consultation with lecturers
5. lecturers who are knowledgeable, organized, clear in presentation and able to cite relevant examples and stimulate thinking
6. desirable affective characteristics of lecturers include being patient, approachable and having a good sense of humor.

It is worrying to note that lecturers have not considered affective characteristics of lecturers and using relevant examples as important. According to Keller's Motivational Model (1983), students' interest and relevance to learning goals are major motivational dimensions in learning. Wlodkowski (1984) suggests four important sets of strategies in engaging students' attention and interest in learning:

1. Attitude strategies

What can I do to establish positive student attitudes toward the learning situation?

2. Needs strategies

- How can I best meet the needs of students?
3. Stimulation strategies
What learning activity will continuously stimulate attention and sustain their engagement?
 4. Affective strategies
How can I make the affective experience and emotional climate for this activity positive for the students?

Wlodkowski's Model is applicable to teacher education as well to education of students in schools. While there is much hype for on-line learning, trainees and participating lecturers in the survey were not very keen on on-line delivery. Some lecturers who favour on-line delivery find on-line delivery "neat and convenient" but others are unconvinced and find it impersonal and non-interactive. Trainees preferred personal attention from and interaction with lecturers and fellow colleagues.

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