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**A COMPARATIVE STUDY ON  
UNDERGRADUATES' AND GRADUATES'  
PERCEPTIONS OF TEACHING AND LEARNING**

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# A COMPARATIVE STUDY ON UNDERGRADUATES' AND GRADUATES' PERCEPTIONS OF TEACHING AND LEARNING

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## Abstract

In order to refine teaching styles and methods of assessing students' learning, it is important to realize the perceptions different students hold about teaching and learning. Thus, this study was undertaken to compare students in the Bachelor of Science with Diploma in Education/Physical Education programmes (BSC) with those in the Postgraduate Diploma in Education (Secondary) programme (PGDE) on their perceptions of the desirable characteristics of a "good" lecturer, their preferences of teaching methods and student assessment, their motives for taking the course and their learning styles employed. The results indicate that both groups of students were genuinely interested in the courses they enrolled in. Although there was a high degree of unanimity among students in their conception of a "good" lecturer and their preferred learning styles, the PGDE students preferred lecturers who were more expressive. In addition, the PGDE students were more independent in their learning than the BSC students. The findings of the present study may serve to kindle some genuine ideas among lecturers on how to improve the quality of teaching and learning in the University.

**Keywords:** Perceptions of teaching and learning, lecturer characteristics, learning styles, student assessment, higher education.

## INTRODUCTION

"Good" teaching involves making correct decisions of various kinds. Some of these include the selection of the appropriate content to be taught, the way teaching materials should be organized, the type of teaching strategies to be employed and the methods to be adopted for the assessment of students. Such decisions are usually affected by administrative constraints, the lecturers' perceptions of teaching and learning, the lecturers' attitudes towards students and the correctly accepted theories of teaching and learning. However, it must be borne in mind that the students are virtually the only consumers of the services provided by the university in its capacity as an institution for instruction. Since the students are the consumers of instructional processes, their judgements should also be the determinants in defining the significant variables of "good" teaching (Grush and Costin, 1975). It has been noted that many universities are now considering the students' views on this matter (Miron and Segal, 1978).

In the National Institute of Education, a lecturer may be assigned to teach both undergraduates (students in the BSC programme) and graduates (students in the PGDE programme). In order to make good decisions on teaching styles and methods of student assessment, it is important to know the perceptions of teaching and learning held by these different groups of students. Thus, the aim of this investigation was to compare students in

the Bachelor of Science with Diploma in Education/Physical Education (BSC) programmes with those in the PGDE programme on their perceptions of the characteristics of a "good" lecturer, their preferences of teaching methods and methods of student assessment, their motives for taking the course and their learning styles employed.

## **METHODOLOGY**

### **Sample**

The sample target comprised 125 students in the PGDE programme and 102 students from the first, second and third year BSC programme. The PGDE is a one-year programme for graduates holding either basic or honours degrees in Science while the BSC is a four-year programme for 'A' level holders.

### **Instrument**

A questionnaire comprising six sections (personal data, motivation for learning, learning style, student assessment, lecturer characteristics and teaching methods) was drawn up by adopting appropriate items from Bligh (1986) and Wee and Huan (1991). Students were asked to respond to the statements by writing down a number on the scale of 1 to 5 whereby 1, 2, 3, 4 and 5 represented "strongly disagree", "disagree", "neutral", "agree" and "strongly agree", respectively.

### **Data analysis**

The survey data was compiled and analyzed. Results were presented as means  $\pm$  standard deviations (SD). Differences between two means were evaluated by the student's t-test. Differences with  $P < 0.05$  were regarded as statistically significant.

## **RESULTS**

### **Motives for taking the course**

The motives of the students enrolling in the two programmes were investigated and the results are presented in Table 1. There were similarities in the responses from the two groups of students to the questions raised. Genuine interests in the subject was by far the strongest motivation for them in enrolling in the course. The two groups of students felt that their abilities in the subject did not play an important role in their choice of the subject.

### **Learning Style - Preferences**

The responses to the questions on learning styles of the students in lectures, tutorials and practicals are presented in Tables 2 and 3. The means of the responses ranged from 1.73 to 3.53. Hence, the students were not totally dependent on the lecturer. They were equally not independent in their learning. A mixture of guidance by the lecturer and independent work by themselves was preferred. Relatively speaking, the PGDE students were more independent. The scores given by the PGDE students to question 1 and question 3 were

significantly higher and lower, respectively, than the corresponding values of the BSC group (Table 2). The scores given by the PGDE students to question 5 was significantly lower than that given by the BSC group (Table 3).

Table 1 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on their motives for enrolling in the course

	BSC	PGDE
1. I am interested in the subject.	4.14 $\pm$ 0.73	4.08 $\pm$ 0.82
2. I am good in the subject.	3.33 $\pm$ 0.74	3.54 $\pm$ 0.94
3. Good job prospects (teachers/tuition teachers in this subject are in high demand; having done this subject makes me more 'marketable' when I want to switch to other jobs)	2.89 $\pm$ 0.97	2.78 $\pm$ 1.08
4. I have no other choice; this is the last resort.	2.07 $\pm$ 1.14	1.94 $\pm$ 1.12
5. Never think about the why because it just seems to be the obvious subject to take.	2.64 $\pm$ 1.15	2.66 $\pm$ 1.33

Table 2 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on their learning styles in lectures and tutorials

	BSC	PGDE
1. I am totally independent, I don't need any help from the lecturer, and I learn through reading textbooks and solving tutorial problems.	2.08 $\pm$ 0.89	2.40 $\pm$ 1.09*
2. I am largely independent, occasionally I need the help of the lecturer to clarify my doubts.	3.34 $\pm$ 1.05	3.40 $\pm$ 1.07
3. The lecturer must give me a lot of guidance, so that I only have to do a small bit of additional reading and problem solving.	2.94 $\pm$ 0.96	2.66 $\pm$ 1.01*
4. The lecturer must give me complete lecture notes and solutions to all tutorial problems, so that I can memorise them.	1.92 $\pm$ 0.93	2.02 $\pm$ 0.99

\* significantly different from the BSC group,  $P < 0.05$ .

Table 3 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on their learning styles in practicals

	BSC	PGDE
1. When I do practicals, my main aim is to have the hands-on experience, getting the data is secondary.	3.53 $\pm$ 0.95	3.50 $\pm$ 0.98
2. When I go to practicals, my main aim is to get the data, and if I can get the data from my friends then I don't bother to do the experiment myself.	1.73 $\pm$ 0.80	1.81 $\pm$ 0.90
3. If the experimental data that I obtained does not 'fit' the theory, I will adjust/alter it so that it coincides with what it should be.	2.69 $\pm$ 0.93	2.80 $\pm$ 1.12
4. I will read up on my own the experimental procedures, the theory involved, etc before I go to the practicals.	3.46 $\pm$ 0.92	3.48 $\pm$ 0.88
5. At the beginning of a practical, I expect the lecturer to brief me on the experimental procedures, the theory involved, etc, so that I only have to read up a little beforehand.	3.48 $\pm$ 0.87	3.08 $\pm$ 1.00*
6. At the beginning of a practical, I expect the lecturer to explain in detail the experimental procedures, the theory involved, etc, so that I don't have to prepare beforehand.	2.42 $\pm$ 0.94	2.31 $\pm$ 1.05

\* significantly different from the BSC group,  $P < 0.05$ .

### Assessment - Preferences

The students' preferences with regards to assessment was also investigated and the results are presented in Table 4. The scores for questions (1a), (1d) and (1g) ranked much higher (mean ranged from 3.81 to 4.35) than those for other questions. The students preferred the lecturers to "advise students on revision and examination techniques". They also felt strongly that the lecturer should reveal to them what were expected of them on tests, assignments and examinations. One interesting feature noted was that the students strongly preferred the lecturers to give them detailed feedback on their assignments submitted. The scores for questions (1f), (1h) and (2) indicated that the students preferred to have continuous assessment rather than just one final examination. The results obtained for question (1c) indicated that the students did not depend solely on the lecturer in providing them answers to exam questions. However, they preferred the lecturer to give them hints on examinations. The score given by the BSC students to question (1i) was significantly higher than that given

by the PGDE students, though both scores were at the lower range of the scale. When they were asked to indicate their preferences on the percentage of 'thinking' to 'reproduce' questions, the score obtained from the PGDE students ( $53.1 \pm 17.9$ ) was significantly higher than that from the BSC students ( $45.0 \pm 17.7$ ).

Table 4 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on their preference for assessment

		BSC	PGDE
1.	I prefer the lecturer to		
a.	advise students on revision and exam technique.	4.02 $\pm$ 0.81	3.92 $\pm$ 0.92
b.	plan the direction of teaching with exam always in mind.	3.24 $\pm$ 0.98	3.02 $\pm$ 1.05
c.	'spoon feed' students for exam whenever possible.	2.36 $\pm$ 0.93	2.33 $\pm$ 0.90
d.	tell students exactly what is expected of them on exam, tests and assignments.	4.05 $\pm$ 0.92	3.81 $\pm$ 1.07
e.	tell students which topics are most important for exam purposes.	3.72 $\pm$ 1.00	3.64 $\pm$ 0.94
f.	give tests regularly during the course.	3.45 $\pm$ 0.83	3.53 $\pm$ 1.08
g.	mark students' work and give detailed feedback.	4.25 $\pm$ 0.76	4.35 $\pm$ 0.69
h.	give no tests at all so that everything depends on the exam.	1.71 $\pm$ 0.68	1.68 $\pm$ 0.92
i.	set all questions of 'reproduce' type.	2.38 $\pm$ 0.89	1.82 $\pm$ 1.05*
2.	I feel more pressurising to have continuous assessment than to have just one end of year exam.	1.82 $\pm$ 0.76	1.98 $\pm$ 0.93

\* significantly different from corresponding values of the BSC group,  $P < 0.05$ .

### Teaching Methods - Preferences

The effectiveness of the various teaching methods evaluated by the two groups of students is presented in Table 5. Students from both programmes felt that tutorials, personalised tutorials, laboratory sessions, field trips and group project works (mean ranged from 3.72 to 4.21) were more effective teaching methods than large group lectures, seminars

and individual project works (mean ranged from 2.72 to 3.34). Compared to the BSC students, the PGDE students felt that laboratory sessions were more effective than field trips.

Table 5 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on the effectiveness of the following teaching methods for the teaching of Science

	BSC	PGDE
1. Large group lectures	2.72 $\pm$ 1.13	2.89 $\pm$ 0.96
2. Seminars (Presentation followed by discussions)	3.13 $\pm$ 1.03	3.25 $\pm$ 0.97
3. Tutorials involving 5-25 students	3.89 $\pm$ 0.96	4.11 $\pm$ 0.66
4. Personalised tutorials (less than 5 students)	4.21 $\pm$ 0.96	4.13 $\pm$ 1.00
5. Laboratory sessions	3.77 $\pm$ 0.73	3.99 $\pm$ 0.77*
6. Field trip	3.99 $\pm$ 0.82	3.74 $\pm$ 1.01*
7. Group project work	3.72 $\pm$ 0.89	3.82 $\pm$ 0.87
8. Individual project work	3.32 $\pm$ 1.02	3.34 $\pm$ 1.04

\* significantly different from the BSC group,  $P < 0.05$ .

### Lecturer Characteristics

The perceptions of the PGDE and BSC students on the desirable characteristics of a "good" lecturer are presented in Tables 6, 7 and 8. Table 6 indicates that both groups of students rated "engage eye-contact with students", "speak clearly" and "speak loudly" much more important than the other characteristics evaluated under mannerism and speech. The results show that the students preferred lecturers who were concerned, confident, relaxed, friendly, and to a certain extent expressive. They did not like lecturers who were formal and critical. An interesting feature noted in Table 6 is that the mean scores given by the PGDE students to questions A1, A2, B1 and B3 were significantly higher than the corresponding scores given by the BSC students, indicating that the PGDE students preferred lecturers who were more expressive.

Table 7 shows that the mean scores obtain for questions D1-D6 from both groups were in the range of 4.10 to 4.76. This indicates that the students ranked the capability of organizing lectures well a very important trait of a "good" lecturer. However, the scores given by the PGDE students to questions D2-D6 were significantly lower than those given by the BSC students. Both groups of students did not agree to the idea of "covering very little material in class". They also rated the capability of giving good explanation in lectures another important trait of a "good" lecturer. The mean scores obtained for questions E1, E2, E3, E7, E9 and E10 for both groups of students were in the range of 4.11-4.78. Although



the results indicate that students relied on notes provided, they preferred the lecturer to teach for understanding rather than for reproduction of notes. The response given by the PGDE students to question E7 was significantly lower than that given by the BSC group.

The results in Table 8 show that the group of students unanimously agreed that "lecturers' interaction with students", "the interests they expressed in their subject" and "the rapport established with the students" were important characteristics which a "good" lecturer should possess. Another interesting finding observed in Table 8 is that the both groups of students preferred lecturers to incorporate jokes and humorous anecdotes in their lectures. The mean scores given by the BSC and PGDE students to question G2 were 3.9 and 3.95, respectively.

Table 6 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on lecturers' mannerism, speech and affect

Lecturer Characteristics	BSC	PGDE
<b>A. <u>Mannerism</u></b>		
1. move back and forth in front of class	2.82 $\pm$ 1.02	3.44 $\pm$ 0.84*
2. exhibit hands or arms gestures	3.21 $\pm$ 0.91	3.67 $\pm$ 0.75*
3. exhibit facial gestures or expressions	3.86 $\pm$ 0.69	3.96 $\pm$ 0.59
4. engage eye-contact with students	4.25 $\pm$ 0.74	4.38 $\pm$ 0.63
<b>B. <u>Speech</u></b>		
1. speak in a "dramatic" or expressive way	3.36 $\pm$ 0.91	3.71 $\pm$ 0.85*
2. speak loudly	4.10 $\pm$ 0.91	4.11 $\pm$ 0.79
3. speak slowly	3.51 $\pm$ 0.95	3.81 $\pm$ 0.93*
4. speak clearly	4.75 $\pm$ 0.50	4.64 $\pm$ 0.51
<b>C. <u>Affect</u></b>		
1. concerned (as opposed to aloof)	4.59 $\pm$ 0.49	4.50 $\pm$ 0.52
2. relaxed (as opposed to nervous)	4.35 $\pm$ 0.62	4.30 $\pm$ 0.63
3. confident (as opposed to apprehensive)	4.55 $\pm$ 0.57	4.52 $\pm$ 0.58
4. formal (as opposed to casual)	2.97 $\pm$ 0.90	3.02 $\pm$ 0.75
5. expressive (as opposed to bland)	3.90 $\pm$ 0.71	4.01 $\pm$ 0.70
6. friendly (as opposed to reserved)	4.29 $\pm$ 0.67	4.29 $\pm$ 0.62
7. critical (as opposed to approving)	3.12 $\pm$ 1.07	3.06 $\pm$ 1.03

\* significantly different from the BSC group,  $P < 0.05$ .

Table 7 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on lecturers' organization and explanation

Lecturer Characteristics	BSC	PGDE
<b>D. <u>Organization</u></b>		
1. give preliminary overview of the series of lectures at beginning of the course	4.58 $\pm$ 0.55	4.45 $\pm$ 0.58
2. review topics covered in previous lecture at the beginning of each class	4.28 $\pm$ 0.62	4.10 $\pm$ 0.74*
3. use headings and subheadings to organize lectures	4.65 $\pm$ 0.50	4.46 $\pm$ 0.62*
4. explain how each topic fits into the course as a whole	4.45 $\pm$ 0.57	4.26 $\pm$ 0.65*
5. deliver lectures in a logical sequence	4.76 $\pm$ 0.43	4.58 $\pm$ 0.54*
6. periodically summarize points already made	4.54 $\pm$ 0.61	4.26 $\pm$ 0.70*
7. cover very little material in class	2.07 $\pm$ 0.76	2.23 $\pm$ 0.82
<b>E. <u>Explanation</u></b>		
1. use diagrams/audiovisual aids to illustrate concepts and facilitate explanations	4.33 $\pm$ 0.72	4.39 $\pm$ 0.62
2. give everyday, real-life examples to illustrate concepts or principles	4.39 $\pm$ 0.63	4.45 $\pm$ 0.60
3. use demonstrations to illustrate concepts or principles	4.35 $\pm$ 0.61	4.34 $\pm$ 0.65
4. stress most important points by pausing, speaking slowly, raising voice etc	4.43 $\pm$ 0.67	4.33 $\pm$ 0.68
5. dictate prepared notes slowly so that students could copy	3.23 $\pm$ 1.01	3.06 $\pm$ 1.12
6. provide a copy of the notes to students	4.09 $\pm$ 0.77	4.00 $\pm$ 0.80
7. step by step derive formulas on the board or on transparency	4.23 $\pm$ 0.73	3.91 $\pm$ 0.82*
8. suggest ways of memorising complicated ideas	4.11 $\pm$ 0.94	4.10 $\pm$ 0.81
9. teach for understanding than reproduction of notes	4.51 $\pm$ 0.74	4.57 $\pm$ 0.63
10. explain points clearly and at students' level	4.78 $\pm$ 0.41	4.72 $\pm$ 0.47

\* significantly different from the BSC group,  $P < 0.05$ .

Table 8 Response (mean  $\pm$  SD) of students from the BSC (n=102) and PGDE (n=125) programmes on lecturers' interaction, interest and rapport

Lecturer Characteristics	BSC	PGDE
<b>F. <u>Interaction</u></b>		
1. encourage students to ask questions during lectures	4.07 $\pm$ 0.84	3.92 $\pm$ 0.95
2. ask questions of individual students	3.33 $\pm$ 0.91	3.41 $\pm$ 0.95
3. ask questions of the class as a whole	3.62 $\pm$ 0.83	3.50 $\pm$ 0.86
4. encourage students to participate in discussion	4.21 $\pm$ 0.65	4.31 $\pm$ 0.63
5. answer student's questions thoroughly in class	4.09 $\pm$ 0.79	3.89 $\pm$ 0.76
6. ask if students understand and clear students' doubts before proceeding to next topic	4.43 $\pm$ 0.57	4.24 $\pm$ 0.62*
7. encourage students to think independently	4.23 $\pm$ 0.64	4.32 $\pm$ 0.62
8. praise students for good ideas	4.25 $\pm$ 0.74	4.34 $\pm$ 0.58
9. incorporates students' ideas into lecture	4.18 $\pm$ 0.74	4.13 $\pm$ 0.68
<b>G. <u>Interest</u></b>		
1. show strong interest in subject matter	4.59 $\pm$ 0.51	4.60 $\pm$ 0.52
2. tell jokes or humorous anecdotes	3.90 $\pm$ 0.71	3.95 $\pm$ 0.84
3. relate subject matter to student interest or student activities	4.28 $\pm$ 0.62	4.24 $\pm$ 0.65
4. describe personal experiences relevant to subject matter	4.02 $\pm$ 0.72	3.85 $\pm$ 0.83
5. present challenging, thought-provoking ideas	4.14 $\pm$ 0.68	4.19 $\pm$ 0.65
<b>H. <u>Rapport</u></b>		
1. sensitive to students' feelings	4.44 $\pm$ 0.61	4.42 $\pm$ 0.59
2. concerned that students understand and learn subject matter	4.64 $\pm$ 0.48	4.49 $\pm$ 0.50*
3. available for consultation outside class	4.53 $\pm$ 0.56	4.46 $\pm$ 0.53
4. fair and impartial	4.60 $\pm$ 0.57	4.62 $\pm$ 0.55
5. tolerant of students' point of view	4.31 $\pm$ 0.69	4.32 $\pm$ 0.61

\* significantly different from the BSC group,  $P < 0.05$ .

## DISCUSSION

The results obtained in this study suggest that there were some significant differences between the BSC and PGDE students in their conceptions of the desirable characteristics of a "good" lecturer, the preferences of learning styles and what they regarded as good assessment and teaching methods. The mean scores obtained for the motives of the students enrolling in the two programmes indicate that the students were genuinely interested in pursuing a Bachelor Degree with Diploma in Education/Physical Education or Postgraduate Diploma in Education. Results indicate that the PGDE students were more independent in their study than the BSC students. This could be due to the differences in experience and exposure of the two groups of students. Although there was a high degree of unanimity among the students in their preferences of assessment method, the PGDE students preferred a greater percentage of "thinking" to "reproduce" questions. This suggests that the PGDE students, being more mature, exhibit more desirable approaches to academic learning (Richardson, 1994).

The two groups of students share similar opinion on what they regarded as effective teaching methods in science education. Both groups preferred personalised tutorials, laboratory sessions, field trips and group project works rather than large group lectures, seminars and individual project works. It would therefore suggest that the students did not enjoy passive methods of transmitting information which is usually the case in large group lectures (Bligh, 1986). The dislikes of seminars and individual project works could be due to their lack of experience and confidence in expressing themselves.

In the students' opinion, the "good" lecturer at the University should be able to organize his lectures well, give good and clear explanations, interact and establish rapport with the students, show interest in the subject matter, speak clearly and loudly, and engage eye contact with students. He should also be concerned, confident, friendly, relaxed and expressive. The PGDE students were more critical on the lecturer's mannerism and speech. This could be related to their exposure in the curriculum studies course. The ratings of the "organization of lectures" given by the PGDE students were significantly lower than those given by the BSC students, re-confirming that the former students were more independent than the latter students. One interesting feature observed is that both group of students felt strongly that lecturers should incorporate jokes and humorous anecdotes into their lectures. This further suggests that the schooling experience of students could have groomed them to identify humour as an important aspect of effective teaching.

The findings and conclusions of the present study may serve to kindle some new ideas among lecturers on how to improve the quality of teaching and learning in the University.

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