Application of Interactive Methods in a Distance Education Programme

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BACKGROUND

The success or failure of any education system depends largely on teachers as they are purveyors of knowledge and major agents of socialization of students. "They can make a crucial contribution to promoting creativity and excellence in education" (National Education Commission, 2003). However, it was revealed by many evaluation studies of primary and secondary educational reforms that "a major barrier to the successful implementation of educational reforms has been the uneven and poor performance of teachers in promoting creativity through an activity based learning-teaching process" (2003 NEC).

Previous studies also revealed that the learning outcomes of a programme are more effective when the instruction methods are more interactive. The two ingredients that would lead to effective outcomes as identified by Zirkin and Sumler (2008) are the availability of the instructor/tutor and the intellectual engagement of the student. Especially in a teacher education programme which is geared for development of professional competencies of student teachers, immediate interaction between tutors and student teachers is essential.

Further, they argue that "Learning involves more than the performance in subject matter. It also involves the ability to reason and argue cogently, to respond under the pressure of required real-time reactions, and to assimilate arguments and ideas from several individuals in a group who may disagree" (Zirkin and Sumler, 2008,pg 6). Therefore, one can query about the effectiveness of the printed modules or computers that take the place of the teacher in a distance education setting for development of professional competencies of teachers.

The Faculty of Education of the Open University of Sri Lanka has incorporated interactive techniques such as interactive day schools and assignments to the teaching-learning process of a teacher education programme conducted through the distance mode with the ppurpose of improving the quality. Those interactive techniques have been identified and developed in relation to a number of brainstorming sessions and workshops in which both internal and visiting lecturers had participated. It is expected that by taking part in an interactive manner in the teaching-learning process , student teachers themselves will experience the effectiveness of the strategies and develop necessary skills and positive attitudes towards implementing such techniques with their own students.

Having introduced such techniques, a research study was conducted to reveal the perception of both student teachers and lecturers regarding the newly introduced interactive methods for the PGDE Programme.

The specific objectives can be identified as follows:

- to investigate the perception of student teachers and lecturers regarding the interactive methods introduced to the PGDE Programme
- to investigate the opinion of student teachers' and lecturers' on the contribution of interactive methods to attain the expected outcomes of the study

METHODOLOGY

The sample of the study consisted of graduate teachers following the Post Graduate Diploma in Education Programme at the Open University of Sri Lanka. Table 1& 2 illustrates the background characteristics of the sample. The total sample included 763 student teachers.

Table 1- Student teachers' sample - Gender by Age

Gender	Age category				Total
	21-30	31-40	41-50	Above 50	
Male	6.5	**16.5**	3.2	.4	26.5
Female	18.9	**48.4**	5.9	.3	73.5

Table 2- Marital Status of student teachers

Category	Frequency	Percentage
Married	588	77.1
Unmarried	175	22.9
Total	763	100

According to the above tables the sample of the study included a large number of married female student teachers who were 31-40 years of age. All students enrolled in the PGDE programme were newly appointed graduate teachers who are working in the school system.

A questionnaire was used as the main method to collect the information from student teachers about the interactive techniques used at the day schools of the programme they follow. The suitable time to administer the questionnaire among student teachers was identified as the last day school session of the semester. In addition, open-ended interviews were used to collect information from 10 lecturers.

Comprehensive statistical techniques such as ANOVA and Factor Analysis were carried out in addition to simple techniques such as frequency analysis and cross tabulations.

FINDINGS OF THE STUDY

The main finding of the study is that both the student teachers and lecturers had a high perception about the interactive methods incorporated into the programme of study.

Table 3 & 4 illustrates their overall perceptions and perception of male and female teachers separately on day schools, their environment and day school lecturers.

Table 3- Student perception on day schools, environment and day school lecturers

Statement	Overall mean	Male mean	Female mean
Day Schools 4.Encourage participation	4.12	4.08	4.14
5.Interaction between students possible	4.10	4.13	4.09
6. **Not receiving feedback**	**3.03**	**3.02**	**3.01**
7. Activities are challenging	3.61	3.70	3.58
8.**Limited opportunities available for sharing views**	**3.04**	**3.09**	**2.99**
9. High motivation for group work	4.15	4.16	4.15
10.Provide opportunity to acquire skills	3.95	3.96	3.94
11. Able to change our attitudes	3.94	3.89	3.96
12. No opportunity for creative work	**2.61**	**2.66**	**2.59**
13. No opportunity to solve problems	**2.56**	**2.53**	**2.56**
Lecturers 14. Have a high motivation	4.11	4.08	4.12
15.Have a good preparation	4.05	4.02	4.07
16. Maintain a good	3.97	3.91	3.98

interaction with students			
17. **Not familiar with the method**	**2.48**	**2.58**	**2.45**
18. Have necessary skills	3.92	3.84	3.95
19. **Do not use suitable teaching aids**	**3.04**	**3.06**	**3.04**
20. Provide opportunities for student interaction	3.94	3.88	3.96
21. Provide feedback	3.82	3.82	3.82
Environment 22. Facilities available	3.29	3.29	3.29
23. Motivating	3.19	3.18	3.19
24. Environment not suitable for group work	2.70	2.76	2.75
25. **Act as a barrier for student-student interactions**	**2.57**	**2.66**	**2.64**

The means obtained for all the positive statements were higher than the means obtained for the negative statements. For instance, the lowest mean obtained for positive statements was 3.58 (7) and the highest mean was 4.16 (9). These means confirm that the student teachers have a high perception about all the aspects related to day schools, their environment and day school lecturers. The highest mean obtained for a negative statement was 3.06 (19) which further confirm that the negative perception expressed by student teachers is not that strong. The eight negative statements included in these three sections had the lowest means.

Table 4- Student Teachers' perception on assignments and outcomes

Statement	Overall mean	Male mean	Female mean
Assignments			
30. Challenging	3.89	3.97	3.86
31. Very clear	3.62	3.55	3.65
32.**Not designed properly**	**2.86**	**2.89**	**2.85**
33. All the instructions are provided	3.62	3.52	3.62
34. Highly motivated to complete assignments	3.98	3.94	3.98
35. Need to do practical activities	3.94	3.97	3.94
36. Forced to work in groups	3.78	3.76	3.78
37. Provide opportunities for creative/analytical skills	3.88	3.84	3.88
38. **Not capable in changing attitudes**	**2.52**	**2.52**	**2.52**
39. **Difficult to achieve the objectives by completing assignments**	**2.43**	**2.40**	**2.43**
Outcomes 40. Results are satisfactory	3.85	3.91	3.82
41. Will change attitudes of student teachers	3.94	3.98	3.92
42. Very effective method for communicating with students	3.92	3.94	3.91

43. Help to achieve overall objectives of the programme	3.92	3.97	3.89

As shown in Table 4, means related to all the positive statements were higher than the means related to the negative statements. These statistics also confirms that the student teachers have a very high perception about the assignments and also about the overall outcomes of the programme.

In all the four areas of the questionnaire, male and female teachers had a mean very similar to the overall mean. ANOVA calculated in relation to each statement also confirm that the variance is not significant between the means of male and female teachers (Table 5) .

Table 5- ANOVA- Variance between male and female student teachers

Statement	F	Signi:	Statement	F	Signi:
Day schools 4.	.685	,408	Assignment 26.	1.257	,.263
5	.306	.580	27	.314	.575
6	1.876	.171	28	.070	.791
7	2.024	.155	29	1.802	.180
8	1.906	.149	30	.586	.444
9	.035	.852	31	.330	.566
10	.071	.771	32	.035	.851
11	1.021	.313	33	.563	.453
12	.717	.397	34	.013	.908
13	.136	.712	35	.304	.582
Lecturers 14	.017	.782	Outcomes 36	..890	.346
15	.420	.517	37	.1.000	.318
16	.833	.362	38	.125	.724
17	2.443	.133	39	.318	.573
18	2.260	1.33			
19	2.667	.103			
20	.788	.375			
21	.002	.967			
Environment 22	.000	.991			
23	.002	.963			
24	.438	.508			
25	.727	.394			

Similar analyses were carried out to check the variance between married and unmarried teachers as well as between the four age groups. Surprisingly none of the variance was significant at .05 or .01. These findings also support the idea that the student teachers had a high perception about the interactive day schools, lecturers, environment, assignments and outcomes.

Ten lecturers who had been interviewed also expressed that they observed a very high enthusiasm and a high motivation from student teachers at the interactive day schools. In a distance programme, students are expected to read modules and come prepared for discussions and clarifications. As they reported the interactive day schools provided opportunities to test their knowledge and to improve their professional skills related to planning, organization and presentation of the teaching-learning process. Lecturers further admitted that their preparation for interactive day schools is some what challenging and they themselves have improved their professional skills by participating in these day schools. According to the point of view of lecturers, student teachers are expected to apply theory into practice through assignments which

is a more challenging and innovative task for newly recruited teachers. As they further highlighted, preparation of interactive assignments tooks more time of the lecturers than the previous assignments though they demanded new skills form student teachers.

EXPECTATIONS OF STUDENT TEACHERS

As shown in Table 6, many student teachers indicated more than one expectation for enrolling in the programme. However, the majority (99.4%) were in agreement that they enrolled in the programme 'to gain skills' which is almost the main objective of the programme. 'To acquire knowledge' 'obtain a qualification' and ' to get a promotion' were the other expectations cited by the students.

Table 6- Expectations about the programme

Expectations	Male	Female	Total
Gain Skills	26.3	73.1	99.4
Acquire Knowledge	17.9	56.4	73.8
To get a promotion	21.4	49.5	70.9
Gain a qualification	18.0	51.5	69.5

As the present study was based on the interactive methods, the student teachers were asked to identify the contribution made by the Day schools and assignments to achieve their expectations. As revealed by Table 7, the student teachers had perceived that the interactive methods (Interactive day schools and assignments) would make a significant contribution to achieve their expectations. Their contribution was some what lower than ' studying modules' which can be considered as a forthcoming finding in a distance education setting.

Table 7- Contribution of day schools and assignments for achievement of expectations

Contributing factor	Total	Percentage
Studying modules	607	76.7%
Day Schools	465	58.8%
Assignments	433	54.7%
Group discussions	380	49.5%
Application of skills	343	43.4%
Revisions	203	25.7%

In addition, the student teachers expressed a high perception to the last four statements which were related to the outcomes of the interactive methods, irrespective of their gender, age and marital status.

36. The results that can be achieved from day schools are satisfactory.
37. Interactive methods would lead to change skills and attitudes of student teachers.
38. This method is useful for communicating ideas to student teachers.
39. This methods would assist in achieving overall objectives of this programme.

A negligible percentage of the sample stated some difficulties they had faced in participating in day schools and in completing assignments. The main argument was that they needed clarifications on theoretical part rather than applying the theory into practice. However, the validity pof this argument is questionable in a distance setting as the theory is given in detail in the printed modules. These teachers are supposed to read the material and come prepared for practical activities.

The above findings confirm that the newly introduced interactive techniques are having a substantial influence on achieving the objectives of the teacher education programme. In other words, the teacher-student interaction and peer interaction created through day schools and assignments are having a substantial impact on developing professional skills of student teachers.

These findings support the idea put forwarded by Palloff and Pratt that " technology does not teach students: effective teachers do" (2000, pg 4) . Further, the research provide evidence to suggest that the effectiveness of distance learning is based on preparation, the instructor's

understanding of the needs of students and an understanding of the target population (Omoregie, 1997). However, it would be better if the relationship between the final examination results and the perception of student teachers could also be examined to prove these findings further.

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