EduTech
e-Journal of Education & Technology
ISSN 0975-5004

Assessment of the Post Graduate Diploma in Geriatric Medicine Programme through Open and Distance Learning at IGNOU – A Case Study

Abstract
This paper is based on a case study of IGNOU's Post Graduate Diploma in Geriatric Medicine which was launched in 2004 to multi skill medical graduates to manage geriatric patients. The study based on institutional data and sample survey revealed that there was a marked male preponderance (72% to 79.5) of the enrolled candidates. Southern states of India, Orissa, West Bengal and Delhi dominated in the enrolment. Both Programme package and administrative aspects were well appreciated. The paper suggests that continuing Medical Education can be well delivered to in-service medical fraternity through the open and distance learning mode. However a majority (68.21%) felt that MCI recognition was must for the Programme.

Key Words: Distance learning, geriatric, medical graduates, continuing medical education

1.0 Introduction

Distance education today offers a very effective alternative to the conventional system for imparting education. The age of information technology has, paradoxically, seen renewed emphasis on face to face and interpersonal contact as a component of good open and distance learning. The new information and communications technology applications in education have given an immense boost to open and distance learning all over the world (Jetkins, 1997)

Numerous studies have shown that a majority of students enrolled in distance education classes are "equally satisfied" or "more satisfied" with online classes, compared to their satisfaction with traditional courses (Beker et al., 2003). Media-rich instructional materials (such as audio and video, audio graphics and animation) have been shown to support complex cognitive process such as elaborate and dual encoding (Schmeeckle, 2003). While it is unclear as to the extent that multimedia is being used in online courses, some research shows that knowledge acquired by online distance learning is equal to, or even superior to, that obtained in traditional settings (Joy & Garcia, 2000).

However hard core clinical subjects are still not being extensively offered through the distance learning mode from most of the global universities or colleges offering the open or distance learning programmes. The handful of courses that are offered in the medical field through this mode are restricted to the production of some modules and assessment exercises without involving much hands on training of the students at the hospitals.

As the population ages, older adults will make up a substantial proportion of the practices of most graduating physicians. People over the age of 65 have more than twice the frequency of contacts with the physicians as younger adults and account for approximately half of all the hospital days. (lee 2004). The problems of the elderly are multidimensional and require multisectorial interventions. Thus the medical fraternity needs to be oriented and trained to meet the challenges of managing the elderly in a comprehensive manner. Most physicians will not choose geriatric medicine as their career, yet will need to be familiar with the principles of caring for elderly patients. (Brotherton ,2005, Hazzard , 2000). There is thus a dire need to train the existing manpower in the area of geriatric medicine. In India there are only a handful of training programmes being offered that too are not very well organized and lack an intense practical or skill oriented component.

Looking at the twin need for the urgency in orienting the Physicians in the area of geriatric medicine and the fact that most of them would like this training to be in service, rather than take up the training as a basic course, IGNOU decided to develop a Post Graduate Diploma Programme in Geriatric Medicine. The programme was launched through the open and distance learning mode in 15 centres designated as Programme Study Centres (PSCs), each centre having a maximum intake of 30 students. The programme consists of a multiple media package which includes self instructional material, practical contact sessions, teleconferencing, audio, video etc. Assignments are used for feedback as well as are a means of evaluating the internal assessment. The practical contact sessions involve training, which is a face to face interaction at identified medical colleges and secondary level hospitals under supervision. For certification, the students have to appear for a term end examination both for theory and practical which they can clear within a maximum period of three years.

2.0 Objectives of the Study

- To study the enrolment pattern of the learners enrolled in the seven year period of the PGDGM programme;
- To assess the quality of the study material of the programme; and
- To study the effectiveness of the training package in imparting the skills related to geriatric medicine through the distance mode.

3.0 Methodology

The programme has been successfully running since 2004 from about 15 centres which have increased to 19 by 2010. It was decided to assess the various aspects of the programme so that the necessary modifications in the curriculum and implementation could be brought about to better the programme.The following methods were adopted to carry out this study:

Records, document, and database analysis: Institutional data, documents, and records were used to source information on various aspects of the programme, namely learner enrolment, learner characteristics and success rates. The data was obtained for the entire seven year period for which the programme has run i.e. 2004 to 2010.

Survey: Semi structured Performa were used for the various aspects of input evaluation. The proformas were sent by post to the students enrolled in the academic year 2004, 2005 and 2006.These proformas were sent during January – February 2008. The responses obtained over a period of the next four months were collected and analysed.
The students were asked to give their responses on various aspects –quantity and quality of the study material, adequacy and effectiveness of the practical training, administrative support provided to the students etc.

4.0 Results

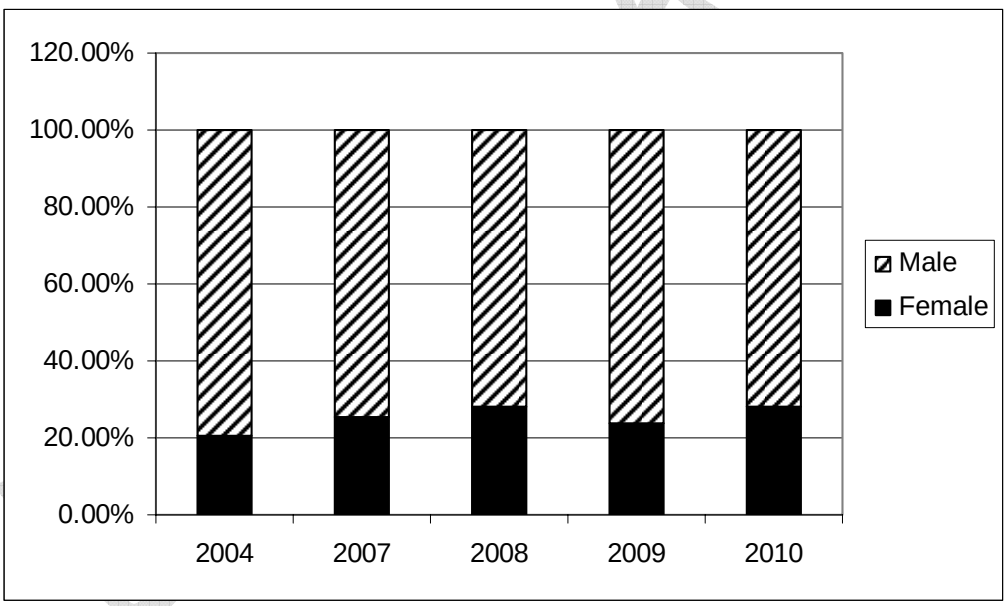
Institutional Data Analysis

The enrollment pattern of the students over the seven year period showed a slow decline (Table I). There was a marked male predominance (72% to 79.5%) over the females in all the years of enrolment. (Fig I *detailed in appended pdf)*

Table I Enrolment pattern of PGDGM students 2004 to 2010

Year	Number of students enrolled
2004	241
2005	210
2006	163
2007	155
2008	149
2009	109
2010	93

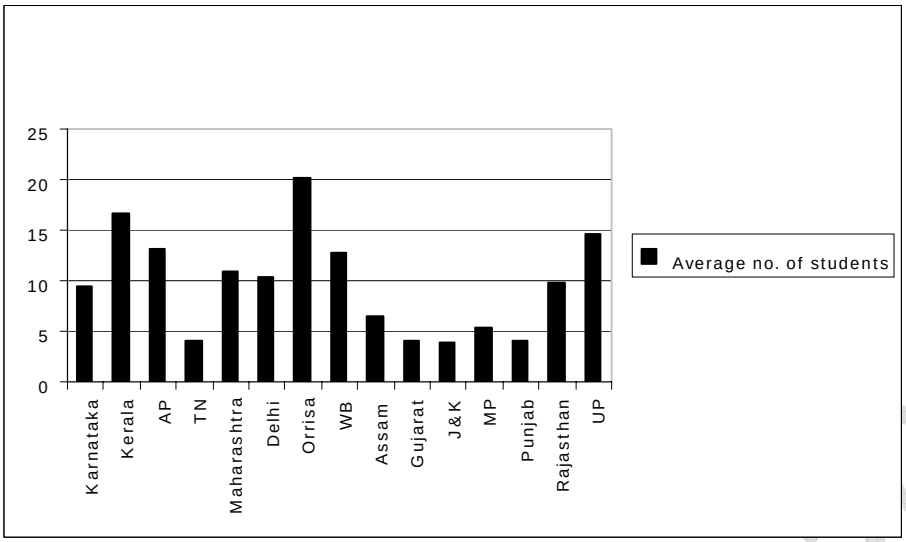
Fig I Gender-wise distribution of students of PGDGM 2004 to 2010



** Data for 2005 and 2006 were not available*

The state-wise distribution showed that there was a preponderance of the students in the southern states. A reasonable proportion of the enrolled students were the residents of Delhi, Orissa and West Bengal. Fig II shows the pattern of average number of students in the different states over the seven year period (2004 – 2010). Although few students also enrolled from many other states like Haryana, Bihar, Himachal and north east states like Manipur, however, the average number of students was less than , therefore, have not been depicted in the graph.

Fig 2 State-wise distribution of students of PGDGM 2004 to 2010



The enrolment pattern in the seventeen programme study centres revealed a variable pattern (Table II). Few of the centres like Delhi, Cuttack, Cochin showed a continuous high enrollment throughout the year. Few centres like Guwahati, Varanasi, Jaipur continuous moderate enrolment. On the other hand few centres like Hyderabad, Khanna showed a declining trend. Some of the centres had an erratic enrolment in few years like Jammu and Srinagar.

Table II PSC wise distribution of PGDGM students 2004 to 2010

S.No	Programme Study Centre	No. Of Students in 2004	No. Of Students in 2005	No. Of Students in 2006	No. Of Students in 2007	No. Of Students in 2008	No. Of Students in 2009	No. Of Students in 2010
1	NIMS, Hyderabad	25	18	15	15	11	5	6
2	Guwahati Medical College	8	7	7	15	7	4	3
3	B.J. Medical College, Ahmedabad	6	6	7	0	4	3	0
4	ASCOMS Medical College Sidhra, Jammu	0	0	0	0	0	5	5
5	M.S. Ramaiah Medical College, Bangalore	11	21	10	10	10	6	12
6	Amrita Institute Of Medical Sciences	30	30	23	14	20	0	0
7	Gandhi Medical College, Bhopal	5	10	3	3	6	0	0
8	B J Medical College, Pune	11	11	0	5	13	20	8
9	S.C.B. Medical College, Cuttack	27	30	24	16	18	10	18
10	CMC Ludhiana	13	16	5	4	3	3	0
11	Dr. Sampurnanand Medical Coll., Jodhpur	9	10	13	10	11	10	4
12	CMCVellore	15	3	6	5	0	0	0
13	KGMU Lucknow	18	12	10	9	6	0	0
14	Kolkatta Medical College	23	9	18	20	10	10	8
15	MAMC Delhi	31	21	22	17	29	12	12
16	Govt. Medical College Srinagar	9	0	0	0	0	7	0
17	MGIMS Wardha	0	0	0	0	0	0	10
18	Military Hospital, Jabalpur	0	0	0	12	0	0	0
19	IMSVaranasi	0	0	0	0	0	7	7

The number of students who could complete the programme successfully after a maximum period of three years of enrolment was also calculated. It was observed that for the first four years (2004 to 2007) about 53% to 65% of the candidates could complete the programme successfully. A drop out of 47% to 35% was therefore observed. It was also observed that except for the first batch, the majority of the students (26% to 40%) successfully completed the programme in the first year of the enrolment. (Table III)

Table III Year-wise percentage of successful completion of the PGDGM programme of students 2004 to 2010

Year	Percentage of successful candidates 1st Year	Percentage of successful candidates 2nd Year	Percentage of successful candidates 3rd Year	Total Number of successful candiadates	Total Percentage of successful candiadates %
2004	7.05	35.2	10.3	128	53.1
2005	27.6	32.8	5.2	138	65.7
2006	39.2	14.7	3.06	95	58.2
2007	34.8	18.7	7.09	94	60.6
2008	26.8	24.8	2.6	25	22.9
2009	19.2	3.6			
2010	10.75				

4.1 Results of sample survey

A sample of the students was taken for accessing the quality of the programme as perceived by the students. Semi-structured proforma were distributed to the students enrolled in 2004 – 2006 batch and the results analysed. The observations are enumerated below.

a) Comments on quality of material and implementation

The material was well appreciated (Table IV) by majority of the students and given the highest grade of very good for readability (60.65%) sequencing (50.38%) organization (44.96%) and comprehension (49.61%). There was no respondent who found the material poor as regards the readability, sequencing, or comprehension. Only one respondent out of the 129 found that the organization of the material was poor.

Table IV Responses on feedback related to study material (batches 2004 to 2006)

S.No.	Quality of material	Very Good	Percentage	Good	Percentage	Satisfactory	Percentage	Poor
1	Readability	78	60.65 %	44	34.10 %	7	5.42	0
2	Sequencing	65	50.38%	52	40.31 %	10	7.75%	0
3	Organization	58	44.96%	55	42.63 %	14	10.85%	1
4	Comprehension Or understanding	64	49.61 %	50	38.75 %	14	10.85%	0

Most of the respondents (62.79%) found assignments up to mark. 32.5% of them found them relatively easy while according to only 1.55% students the assignments were difficult. Majority of students (86.4%) felt that the assignments were of appropriate length. Almost equal number of students found the assignments not useful (47.26%) or useful for reinforcement (45.7%)

A larger number of students (58%) felt that number of skills were adequate for the programme compared to 37.20% who felt that the number of skills were inadequate. More than 80% of students felt that theory counselling sessions are required. Other studies showed similar results. Respondents informed that the study materials of IGNOU were of high standards in terms of quality.

The teleconferencing sessions were found to be useful by most of the students (71.31%). Only about 43.41% students found teleconferencing sessions adequate, while a good number of them (more than 30%) wanted more teleconferencing sessions.

Table V Responses on feedback related to administrative aspects (batches 2004 to 2006)

S.No.	Activities completed	Yes	Percent	NO	Percent	No. response	Percent
1	Receipt of course material in time	117	90.69	8	6.20	4	3.10
2	ID card with enrollment of PSC received in time	117	90.69	7	5.42	5	3.87
3	SDC Allotment in time	97	75.19	23	17.82	9	6.97
4	Where Assignment submitted in time	121	93.79	4	3.10	4	3.10
5	Where Assignment received back in time	100	77.51	22	17	7	5.42
6	Information regarding teleconferencing (letter was send by PIC/RD) in time	77	59.68	45	34.88	7	5.42
7	Information regarding Induction meeting in time	107	82.94	18	13.95	4	3.10
8	Admit card for examination in time	112	86.82	11	8.52	6	4.65

b)Administrative aspects of programme

The students in general gave a good feedback related to the administrative aspects to the programme (Table V). The various non academic activities like timely receipt of course material (90.69%), receiving the ID card in time (90.69%), SDC Allotment before the start of the practical activities (75.19%), receiving the information regarding the induction meeting (82.94) and getting the admit card for the examination on time (86.82 %) were well appreciated by most of the students. In turn majority of the students also submitted their assignments in time (93.79%).

The students were also satisfied with the cooperation received from the various persons involved in the programme, like PIC (86%), RD (69.76%) and programme Coordinator (78.29).

A majority of the respondents (68.21%) felt that MCI recognition was a must for the programme. Seven respondents felt that the programme is very useful even stand-alone.

5.0 Discussion

Extensive advertising of the programme was done before the launch of the programme in 2004. Hence the enrolment was higher in the initial years as expected. Informal interactions during many medical forums in the successive revealed that many were not aware of the programme.

There was a marked preponderance of males in all the years. The reason could be that there are only 15 to 19 PSCs activated, hence not even one in each state. Since the programme requires travelling to the PSC 5 times in a year, it is possible that the female counterparts did not enrol because of the logistics problems. Although students enrolled from almost all the states, however states where a PSC is located showed better enrolment. The variation in the number of students in PSCs over the years could be due to various factors. To name a few - awareness about the programme in that state, feedback about programme from the previous batches or the centre, its quality in the PSC, logistically more feasible to enrol in the particular PSC etc.

About 53% to 65% of the candidates enrolled in the PGDGM programme, could complete the programme successfully. It was also observed that except for the first batch, the majority of the students (26% to 40%) successfully completed the programme in the first year of the enrolment. This shows that the motivation to complete the programme wass maximum in the first year of enrolment. The reason for the difference in the first batch could be because of the teething problems faced for the programme to take of. Other studies revealed different results. Analysis of the undergraduate Physics programme offered by IGNOU revealed that the retention rate in the B.Sc. programme is about 27% and the attrition rate is about 73%. This indicates that IGNOU has created opportunities for learning higher science at a distance, but there is a need to devise effective strategies to enhance the programme completion rate. Of the successful physics learners, 82% took 3 to 6 years, 9% spent the minimum period of three years, about 33% took 4 years, and 28% spent 5 years. This means that learners begin to lose motivation after about seven to eight years. (Mishra, 2009).

Demographic information showed that a large proportion of doctors who was already in practice or job, had enrolled. It clearly shows that there was a felt need to update their knowledge in the area of geriatric medicine.

A very good response was obtained regarding the feedback on all aspects of the quality of the material. The data analysis in other studies on programmes in IGNOU revealed that 99% of responding learners appreciated the courses and the majority of learners rated the courses as good (293, 66%), although the teacher only communicated with them sometimes(403, 82%) (in text), and the study material was partially self-instructional (316, 65%). Considering the

breadth of course material, three out of four learners (374, 75%) opined that the material was adequate; whereas, 64 learners (13%) thought otherwise. In addition, 60 students (12%) found the material lengthy. But learners who did not find the courses adequate gave no suggestions on the topics to be included or deleted. A significant majority of respondents (400, 83%) perceived the course content as relevant, while 16 learners (3%) opined that the materials were not relevant, and 65 learners (13%) were undecided. Respondents in other studies informed that the study materials of IGNOU were high standards in terms of quality (Mishra et al.,2009). The foundation courses have positive impact on skill development because the contents of the study materials were relevant to their jobs. (Gaba, 2002).

The majority of the students were also satisfied with the assignments. Other authors have also stressed on the usefulness of assignments. Create assignments that are relevant, hands-on, and problem-based; design assignments so that the students are using search strategies to solve real world problems in the field; assess students with performance-based projects and provide rubrics and criteria for assessment. (Collen, 2002).

The teleconferencing sessions were also well appreciated by the students. Other studies have shown the usefulness of teleconferencing sessions. There was no significant difference in student outcomes at local and distant sites as assessed by final course grades in pharmacotherapy courses that used interactive videoconferencing technology. This information is valuable considering the increased use of this distance-learning technology in pharmacy school curricula (MacLaughlin, 2004). The students also appreciated the practical training sessions conducted by the counsellors. About 90% of distance learners opined that lab sessions were well planned and structured, lively and stimulating, and helped them to learn a lot of good physics; further, they looked upon practical sessions as an enjoyable experience. But some of these findings were not confirmed by the faculty (Mishra et al., 2009). Moreover, there seems to be no correlation in the grades of learners in practical and theory courses (Khare et al., 2004). Most of the students were also very satisfied with the administrative aspects of the programme.

The overall assessment of the programme reveals that the students enrolled in the PGDGM programme were more than satisfied with the quality of the programme and the way it was managed. A majority of the respondents (68.21%) felt that MCI recognition was a must for the programme. Seven respondents felt that the programme is very useful even stand-alone. To make the programme more effective it is required that the various governmental agencies and accrediting bodies recognise the programme. The enrolment of the programme can be increased many fold if the programme is considered among one of the courses for giving credits towards continuing medical education. There is also a need for vigorous advertisement of the programme.

6.0 References

Beker, A., Horn, L., & Carroll, D. (2003). *Work first, study second: Adult undergraduates who combine employment and postsecondary enrollment.* (Report No. NCES-2003-167). Washington, D.C.: National Center for Education Statistics,.Retrieved January 6, 2004 from *http://nces.ed.ov/pubsearch/pubsinfo.asp?pubid=2003167*

Brotherton SE, Rockey P.H., Etzel, S.I. (2005).*US Graduate Medical Education, 2004-2005: Trends in Primary Care Specialties.* JAMA;1075-82.

Cohen V.L. (2002). A Model for Assessing Distance Learning Instruction, *Edutech Review,* Series No. 3

Gaba, A. (2002). *The Role of Distance Education in the Human Resource Development of India*. Paper presented in PCF2, Durban, South Africa, 29th July – 2nd August 2002.

Hazzard WR.(2000). The Department of Internal Medicine: Hub of the Academic Health Center Response to the Aging Imperative, *Ann Intern Med* ;133, 293-6.

Jetkins, J (1997). *Open and Distance Learning – The cornerstone of Lifelong learning for the Information Age*, Presented paper at the World Conference on Education in India : Next Millennium, on 12 -14 Nov 1997. New Delhi , India

Joy, E., & Garcia, F. (2000). Measuring Learning Effectiveness: A new look at no-significant-difference findings, *Journal of Asynchronous Learning Networks*, 4,1. Retrieved December 20, 2004 from *http://www.sloan-c.org/publications/jaln/v4n1/v4n1_joygarcia.asp*

Khare, P., Garg, S., & Saxena, A. (2004). Performance analysis of IGNOU science students in theory courses through data mining, *Indian Journal of Open Learning, 13*, 29-49.

Lee M, Wilkerson L, Reuben DB, Ferrell BA.(2004). Development and Validation of a Geriatric Knowledge Test for Medical Students*. J Am Geriatr Soc* , 52,983 – 8

MacLaughlin E.J, Supernaw R.B, and Howard K.A, (2004). Impact of Distance Learning Using Videoconferencing Technology on Student Performance, *American Journal of Pharmaceutical Education,*; 68 (3) Article 58

Mishra A, Vijayshri, Garg SC (2009). Evaluation of the Undergraduate Physics Programme at Indira Gandhi National Open University: A Case Study. *International Review of Research in Open and Distance Learning,* 10(6) ISSN: 1492-3831.

Schmeekle, J. (2003). Online training:An evaluation of the effectiveness and efficiency of training law enforcement personnel over the internet. *Journal of Science Education and Technology*, 12(3), 205 – 249.

Dr. Ruchika Kuba
Associate Professor,
School of Health Sciences
IGNOU, New Delhi
ruchikakuba@yahoo.com