CHAPTER IV

CONVENTIONAL AND OPEN UNIVERSITIES

(Comparison of structure of costs and unit cost)

The structure of costs of an educational system is usually determined by characteristic features. Therefore, to know the cost structure, it is essential to know the characteristics of the system. For the purpose of comparing the structure of conventional and open learning system in India, it may be proper to discuss briefly, the characteristics of these two systems. This will help us to know whether the comparison of structure of costs among them is feasible or not? And if feasible to what an extent? To be precise, in this chapter an attempt has been made to answer the following questions:

i. What are the characteristic features of conventional educational system and the open learning system in India?

ii. What are the cost structures of the two systems in India?

iii. What are the limitations of comparing the cost structures of an open learning system?

iv. What has been the expenditure pattern of the two systems during 1986-87 to 1988-89?

v. What has been the per student cost of conventional education system and open learning system in India?
Characteristics of conventional and open learning systems

The two systems differ distinctively from each other in terms of structure, functioning, teaching-learning process and norms regarding admissions, evaluations and examinations.

Structure & Functioning: It refers to the objectives, teaching strategies and evaluation methods of a system. The two systems (i.e. conventional and open learning) differ from each other in terms of the objectives, teaching strategies and evaluation methods prepared for requirements of a learner. The basic difference between the two systems is the provision of flexibility in terms of admission, evaluation, examination and teaching process. The open learning system is quite flexible in above respect. Its main objective is to structure the whole system according to the best suited choice of its Learners. As against this, the conventional education system is quite rigid in terms of the structural aspect, as mentioned above. In this system, the learner has no choice except to follow the norms provided by the system.

The open learning system provides education at the pace of a student. Against this, the conventional education system forces the student to follow the pace of the institution and the teachers. All the facilities, namely libraries, playgrounds, labs, teachers, etc. are made
institutions. The traditional approaches to budgeting and determination of staffing are not readily transferable to the open learning system. The use of media has led to increased specialisation of jobs revolving around the distinctive technologies used in the open learning system of education. The organizational structure is dominated by functional divisions. The teaching learning process in the conventional education system is classroom oriented, which makes the physical presence of the teacher and the students as a necessary condition for the teaching system. The process of teaching under this system is sometimes termed as traditional method, where knowledge is imparted from teachers to students by mode of lectures. There is a human contact between the teacher and the student and the very set up of the system provides scope for the over all development of the personality of a student. The system aims not only at imparting knowledge, but also developing the whole personality of the student. Hence the class room teaching is complemented with student welfare, recreation and sports activities. Teachers have expertise in their subjects and each teacher is assigned a subject of teaching in which he or she specialises. In short, the system runs around the teacher and there is a given relationship between the number of students and teachers. If the number of students is very high so will be the requirement of teachers.
The major difference in the learning processes of the two systems lies in developing, producing and delivering of knowledge to a student. In the conventional education system teachers accumulate knowledge from their experience when they are students and doing research as well as while encountering with the students. They impart this knowledge to students in class rooms through delivering the lectures. But this method of production and distribution of knowledge is based on labour intensive techniques.

As student enrolment increases requirement of the number of teachers also increases accordingly. Against this in an open learning system the knowledge development and production takes place in a highly industrialised form. The whole production process is based on the capital intensive techniques of production. In such a process of production there is a division of labour among the teachers who are actually associated with the knowledge development (i.e development of course material) and those who deliver the knowledge to students. In this system the knowledge is developed and produced by subject specialists forming a group of academicians, technicians and others. The production of knowledge (irrespective of the number of students to be admitted) takes place at a large scale. The teacher in this system is related by media and face to face teaching is substituted with prints, audio, video lessons. One lecture prepared in the studio can be transmitted in a closed and open circuit televisions for thousands of
students and for years to come. This use of media is an inevitable component of the open learning system while the same media is used to complement the teacher in the conventional system. The human contact between the student and the teacher is established in an open learning system through part-time tutors/counsellors who need not necessarily be associated with the development and production of knowledge.

Norms of Admission, Examination/Evaluation

The norms regarding admissions, selection and examinations are very different for the two systems. The conventional educational system works more or less on a prescribed condition regarding age, qualifications and entry point. The subject combinations are given. The time limit for completion of a particular programme is also given. The learner is not left with any freedom regarding selection of subject combination, completion of programme. The evaluation scheme is also predecided. The evaluation of the students is done by internal as well as external examination, but there is no scope for self-assessment for the student. In the open learning systems the norms regarding entry, selection of the combination of subjects, time duration for completion of a given programme are quite flexible. There is no upper age limit for admission into any educational programme. Formal experience along with educational qualification is also taken into consideration at the time of interview. A learner can exercise his choice
for selecting the subject combinations for a given programme and get a certificate for that if he wishes to do so. Learner is free to take as long a period (not more than the upper prescribed time limit) as is convenient for him for completion of the programme which he has opted.

Cost Structure of the two systems

The cost structure of the two systems in principle should differ significantly from each other, the reason being in the open learning system significant costs are incurred at the initial stage of the development of course materials and administrative systems before a single student is enrolled in the system. The development of open learning course material using media requires considerable investment in staff time, with the result that teachers often have to work together to materialise the course. The introduction of new technologies increasingly require students to have access to them before they can take part in the learning process. The cost structure of open learning system may therefore change against capital cost increase. The cost structure of the two systems, i.e., open learning and conventional systems in India are given in chart one. The chart indicates that, both the systems have basically capital cost and revenue cost and cost of broad activities. These are: academic costs, non-academic costs and other costs. The academic costs have further two divisions - Direct Academic Costs and Indirect Academic Costs. Direct Academic costs are the costs of the academic activities in
both the systems and Indirect Academic Costs are the cost of academic services in both the systems.

In the conventional system academic activities are teaching and research. Of late extension is also given a place in the conventional system. In open learning system academic activities are development, production and distribution of course material. Academic services are mainly the services of library and documentation, computers, university services instrumentation and graphic centres. Non academic costs consists of the costs of general administration, common services and general charges, and Estate Management. Other costs include items like staff and student facilities, and some of the costs on miscellaneous items. The cost of examination and evaluation is common in both the systems.

A discussion of the components of costs of the two systems would reveal how the two systems with similar cost structures have different cost components. We shall start discussing the cost components of open learning system and then will pass on to the discussion of the cost components of conventional education system.

Open Learning System

We have already discussed in the broad structure of open learning system that the system has broadly 3 categories of costs; Academic costs, Non academic costs and other costs. Academic costs have two divisions, direct academic costs and indirect academic costs. Direct academic costs consist of
four cost components, (i) Programme development cost; (ii) cost of delivery system; (iii) Material production cost; (iv) distribution cost. Besides there are other indirect academic costs such as library & documentation and computer services, and related academic cost like admissions, and examinations/evaluations.

The component of development of course material has further subdivisions i.e. development of Reading Material and development of audio/videos material. The development of course material has following cost components, namely, cost of organising expert/course writers meetings, honorarium to course writers for writing the text of the programme, honorarium to editors for content and language editing, payments for translation, salary cost of internal faculty and salary cost of non-academic staff of the academic schools.

The component of development of audio cassettes includes, costs of research, scriptwriting, salary of the technical and non technical staff engaged in development, recording, hiring of artists, material used in production and cost of other contingencies related to audio production. The video development component again comprises the salary of the technical and non technical staff engaged in video production, material used in production, payments to artists, entertainment expenses, research expenses, script writing cost, payments to presenters and other related expenses.
The component of distribution cost includes the salary cost of the staff of distribution division and despatch cost of the course material to students.

Delivery cost component of the course material is really the cost component of student support services. It has various sub components like salary of the full and part time staff at the Head Quarter, Regional Centres and Study Centres of the Regional Service Division, counselling, contact programmes, workshops, reading material available with study centres, audio/video cassettes available with study centres, equipment and furniture available with study centres, and costs of other contingent items.

The component of examination and evaluation includes cost of the salary of the staff of evaluation division, cost of printing of question papers, answer books and response sheets, cost of conducting examinations at entrance level and at the end of the period of academic programme, payment to paper setters, cost of evaluation and examination.

The indirect academic costs components have basically two sub-components. These are: (a) library and documentation and (b) computer centre.

The Non academic cost component has three further components namely, (i) general administration, (ii) Estate Management, and (iii) Common Services and general charges.
The sub component of general administration are: (a) costs of the offices of Vice Chancellor, Pro Vice Chancellors, (b) Planning & Development Officer, (c) Director Teacher’s Affairs, (d) Registrar, Finance and Accounts Officers.

The sub component of common services and general charges includes expenses on travelling, postage, purchase of stationery, repairs, electricity charges, water charges, maintenance of staff cars, liveries, rents, taxes, entertainment and other contingencies.

The sub component of Estate Management includes costs of engineering unit, staff for sanitation, security, staff, and maintenance of estate.

After discussing the cost components of the open learning system, based on Indira Gandhi National Open University, we now go on to discuss the cost components of the conventional education system based on University of Delhi, its under graduate colleges and school of correspondence and continuing education in India.

Conventional education system: The conventional education system like open learning system has three major cost components. These are, academic cost, non-academic cost and other costs. Like open learning system academic cost component has two sub components, namely, (a) direct academic cost and, (b) indirect academic cost. The direct academic cost is mainly cost of academic activities which
are teaching and research. The indirect academic costs like
the open learning system, are academic services namely,
library and documentation, computer centre, university
services and instrumentation centre and university graphic
centre. Till now all the cost components of both systems
look similar but a detailed analysis reveals that sub
components in open learning system are: development,
production and distribution of course material, while in
conventional university/college, the academic cost
components are only salary cost of teachers, teaching
supporting staff and teaching input, etc. The difference in
the sub components are due to difference in mode of delivery
systems. In conventional system major academic activity is
teaching and research. In open learning system major
academic activity is the same that is teaching and research
yet the system of delivery is very different. Here, course
material is developed, produced and delivered. Teachers are
only part-time tutors/counsellors. Thus open learning
system is not based on classroom teaching like that in
conventional system. Because of these differences in the
delivery of knowledge to students, the direct cost
components of the two systems are different from each other.

Non-academic cost component of the conventional
education system are quite similar to that of the open
learning system. Here we have three major sub components,
general administration, Common and general charges and
estate management. The sub component of general
administration includes: the cost of the offices of the Vice-Chancellor, Pro Vice-Chancellor, Registrar, Finance Officer, Internal Audit Officer and Planning Officer. Some other components like cost of Hindi teaching and typing cell, expenses of maintaining Gandhi Bhavan, Special Cell and Human Resource Development are additional in the conventional education system. The other component, common services and general charges includes, like that of open learning system, costs of maintenance, equipment, furniture and fixture, travelling, postage, telegrams, telephones, PABX, direct telephones, stationery, repairs, cleaning, maintenance, typewriters, duplicators, room coolers, air conditioners, fans, repairs and polishing of furniture, electricity, water charges, maintenance of staff car, liveries and uniform, rents, rates and taxes, entertainments, legal expenses and other contingencies. The third cost component takes into consideration the same cost components like that of open learning system, i.e., cost of university engineer's office, maintenance of buildings, installation of air conditioners, water coolers, sewage, booster pumps, overhead tanks, and ground reservoirs, storm water drains, road, path and water supply system, maintenance of sub-stations under ground and overhead transmission lines, maintenance of gardens and guesthouse.

The cost component like student facilities is only in the conventional education system. This is due to the fact that open learning system does not require to give facility
CHART NO. 1
RECURRING COST STRUCTURE OF HIGHER EDUCATION

- Conventional Education System
  - Direct Academic Costs
  - Indirect Academic Costs
  - Non-Academic Costs
- Open Learning System
  - Direct Academic Costs
  - Indirect Academic Costs
  - Non-Academic Costs

- Teaching Costs
- Teaching Costs
- Teaching Costs

- Programme Costs
  - Material Costs
  - Material Costs
  - Cost of Curriculum Development
  - Production: Distribution
  - Transaction: Delivery Costs

- Cost of Library
- Cost of University
- Graphic and Documentation
  - Computer Service & Centre
  - Centre
  - Cost of Instruc.
  - Cost of Instruc.
  - Centre

- Cost of General Costs
- Common Estate
- Administration: Service Management
  - Instruc.
  - Instruc.
  - General

- General Costs
- Common Estate
- Administration: Service Management
  - Instruc.
  - Instruc.
  - General
which are included in the component. These facilities are expenses on office of the Dean of Students, Welfare, Delhi University Sports Union, University maintained hostels, expenses on extra curricular activities, fellowships, scholarships, student and staff canteen, expenses on Health Centre.

Examination cost component is similar to that of open learning system. This includes: (a) salary costs of the staff of the controller of examinations (b) expenses on stationery (c) purchase of furniture (d) entertainment (e) conducting of examinations (f) honorarium for confidential examination work and (e) expenses on evaluation centre and convocation.

Limitations of Comparison of costs of conventional and open learning systems:

The two systems have different characteristics. Conventional system works for an overall development of its students with full time teaching learning facilities. In contrast the system of open learning works for skill and knowledge development of its learners. It is a system which works at the pace of students. As a matter of principle, because of these different characteristics, one cannot compare the costs of the two systems but point here is to examine the cost of achieving the same objectives with two different alternatives.
Statistics show that demand for higher education, for various reasons has been increasing and the conventional system with limited resources has not been able to meet the requirements of this increasing demand. To meet this increased demand and to make the opportunities of higher education available to working people, people at home and located at remote places, an alternative education through open learning system has been developed. Since both have the same purpose of developing human capabilities through education, the study of comparison of cost of imparting education through these two system therefore becomes important.

The open learning system in India is relatively new. A few programmes leading to certificates, diploma and degree have been started in the University under study. University does not have any post-gradute programme at the present. Except for the diploma in management, the University does not have any professional programme. In contrast to this, the conventional universities are well established and old ones have well developed educational programmes at graduate and undergraduate levels. Under such circumstances it becomes difficult to have cost comparison of the two systems. As such, what we ultimately compare is the cost of two similar educational programmes in two different systems. It could be a comparison of under-graduate programmes in Arts, Commerce and Science. But, due to the difference in the age and development of the two systems the
cost comparison becomes difficult. Moreover, the conventional system is having a full fledged department of science with undergraduate and post-graduate programmes. And a substantial portion of the total expenditure of universities is attributed to the science department. Against this open university has yet to start science courses. Thus comparison of per student cost of the two systems is difficult unless the programmes of the two systems are similar. Nevertheless this problem can be solved by giving credit or weightage to each programme on the basis of the duration and nature of the programme. This methodology will not be very accurate but will be able to give us some idea about the cost per student in the conventional and open learning systems.

In the calculations of cost we have usually per unit input cost and per unit output cost, the per unit input cost refers to the per student cost based on enrolment in the institution. When we want to calculate per unit output cost we refer to the per student cost based on the number of students graduated. In fact, cost comparisons should be based on per unit output cost of education. Such an analysis will also throw some light on the internal efficiency/productivity of the system, i.e., the number of failures, drop outs and repetitors. Such a comparison is ideal but problem with open learning system is that programmes have just been started, it is not possible to know the final results. Thus at present we are constrained
to base our comparison on input costs in these systems. Wherever it is possible to work out unit output cost, comparison of output costs has also been made. For instance, post graduate diploma programme in management was started in 1987, first batch has already appeared in the final examinations. In this case the per unit output costs in both the systems could be compared. This comparison will have its own limitations, but it will give some idea of the costs in these two systems.

Another problem which arises when we compare per unit output cost is regarding the calculation of the output. In calculating the output, we have to depend on cohort analysis but in the absence of data we may depend on the number of students appeared in the final examinations and the number passed out. The best way is to depend on cohort analysis (i.e. study the progress of a group over the period of time). But that is not possible in the open learning system because of the relaxation in the duration of time for completing a course. No one can be declared as failure unless one fails to complete the course within maximum duration of time. Moreover, even if one drops out after completing a part of the course on the programme, one would be given a certificate for that and cannot be considered a failure. Thus the comparison of output (based on cohort analysis) between conventional education system and open learning may be difficult. Cost structure and the components of the two systems are very different. The
conventional system has higher portion of variable cost. Against this, the open learning system has very high proportion of fixed cost. The basic components of the conventional education system are teaching costs (i.e. mainly the salary of teachers), administrative costs (salary of non-teaching staff) and other general costs. In the open learning system major cost components are course material development cost, material production cost and the material distribution cost. Hence, the cost functions in these two systems are different. In the conventional system the variable costs will influence per unit cost and might increase (but for indivisibility of costs) with increase in the units but in the latter it is fixed cost that will influence the per unit costs and might decline as the units increase, at least to a point. Thus the comparison of cost components and cost structures of the two systems could only be attempted very broadly.

Expenditure Pattern : The expenditure patterns of the institutions under consideration during 1986-87 to 1988-89 are given in Table Nos. 1 and 2 & 3. It can be seen from the tables that the University of Delhi spends little more than half, i.e., between 55% of its total budget on academic activities and academic services. As we have already explained that academic activities of the University of Delhi and its maintained colleges are only teaching. Against this, the academic activity of distance teaching institutions like IGNOU and the School of Correspondence
Education is development, production and delivery of course material. But academic services for both the types of institutions are the same, which include the services of library and documentation, computer centre, university services, instrumentation centre and graphic centre. The Indira Gandhi National Open University spent around 1/5th of its total budget on academic activities and academic services during 1986-87.

The percentage on these components (i.e. academic activities and services) increased to almost 30% during the year 1987-88 and 48% in the third year 1988-89. The reason for this rapid increase was the initial cost/development of activities of the University. In fact, the year 1986-87 was the first year of the functioning of the University with only two academic programmes in operation. In 1987, a few academic programmes were launched. But after 1988 main academic activities started. Thus the full expenditure on academic activities were incurred only that year. The colleges have their major expenses (i.e. 74% to 77%) in academic activities and services during the period under consideration. In the years 1986-87 to 1988-89 the share of these academic activities and services in the total budget of the School of Correspondence Courses and Continuing Education varies between 38% to 42%.

The non-academic activities (i.e. general administration, common services and general charges and
estate management) received nearly 1/4th of the total budget in all the three years at the University of Delhi. The percentage of this component in IGNOU during the period under consideration varied between 79% to 39%. The University spent around 3/4th of its total budget on the non-academic activities during the initial period, i.e. 1986-87. Quite naturally this being the very first year expenditure on non-academic activities was at the higher side. The percentage of expenditure on non-academic activities however declined to 58% and 39% during 1987-88 and 1988-89 respectively. The decline in the percentage share of non-academic activities during these three years was due to the fact that the first year had witnessed no academic programme. Thus all the expenditure was mainly on the establishment and overhead. In the second year a few programmes were developed/launched. During the third year (i.e. 1988-89) quite a few programmes were launched/developed. As a result of this the percentage share of academic activities to total budget increased and share of non academic activities declined. One, therefore, finds a sharp decline in the percentage share of non academic activities from 79% in 1986-87 to 39% in 1988-89. The School of Correspondence Education spent little less than half of its total budget on non academic activities which varied between 45% to 47% during the period under consideration.
The component of student facilities received between 9% to 10% of the total budget during 1986-87 to 1988-89 at the University of Delhi. The maintained colleges seem to be spending nearly 1% of their total budget on student's facilities during the years 1986-87 to 1988-89. The Indira Gandhi National Open University and the School of Correspondence Courses and Continuing Education have no expenses on such facilities. The reason is that such expenses only go with the conventional education system which require facilities to staff and students like students' hostels, canteens, welfare activities, scholarships, fellowships and maintenance of students' union office etc.

The examination is a common activity in both the systems of education, i.e., conventional and open learning system. However, in the open learning system, i.e., IGNOU, the cost of examination and evaluation is the summation of entrance test examination, mid term evaluation and term end examination. Since the number of students appeared for entrance examination is much more than those appeared at the term end examination, it becomes essential to calculate the examination cost separately for the entrance test as well as term end examination. The expenditure did not give any break up of the cost of entrance examination and term end examination. Thus on the basis of the weightage of enrolment for entrance test and actual enrolment for the university, the total expenditure on examination and
evaluation was attributed to the entrance test and term end examination. Some of the components of the examination cost, like payments to evaluators and examiners were only allocated to mid term and term end examination. The reason for this was that, evaluation of the answer sheets of the entrance test is done by internal computers. No payment was thus made for that except in case of Creative Writing entrance test evaluation. After attributing the total cost of examination and evaluation to entrance test and mid term and term end examinations further attribution of cost to each programme was done on the basis of enrolment in each programme and the number of students appeared for the programme. The University of Delhi spent nearly 1 to 2 percent of its total expenditure on examination during the period under consideration. The Indira Gandhi National Openm University spent between 1% to 10% of the total budget on examination activities during 1986-87 to 1988-89. The University started functioning in 1986-87. Thus expenditure on examination was almost negligible. A few courses were launched in the second year, i.e., 1987-88 thereby expenses on examination increased. In the year, 1988-89, a number of examinations and entrance tests were conducted, due to which the percentage share of the examination to the total budget also increased. The constituent colleges spend between 1 to 3% on examinations. The same component (i.e. examination) show; 13% to 15% share in the total budget of the School of Correspondence Courses & Continuing Education.
### Table No. 1

**Expenditure Pattern in Conventional & Open Learning System - 1986-87**

<table>
<thead>
<tr>
<th></th>
<th>University of Delhi (%)</th>
<th>IGNOU (%)</th>
<th>U.G. Colleges (%)</th>
<th>School of Correspondence &amp; Continuing Education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Academic Activities</td>
<td>43</td>
<td>18</td>
<td>72</td>
<td>37</td>
</tr>
<tr>
<td>2. Academic Services</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Non-academic Activities</td>
<td>33</td>
<td>79 *</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>4. Cost of Student facilities</td>
<td>9</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>5. Examinations</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

(163328000) (10807000) (40525853) (12838837)

**Figures in brackets give absolute amount**

*Year 1986-87 being first year of functioning of the IGNOU, the non-academic cost component is exceptionally high and may not be generalised.*
<table>
<thead>
<tr>
<th>Activities</th>
<th>University</th>
<th>IGNOU</th>
<th>U G Colleges</th>
<th>School of Correspondence and Continuing Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Activities</td>
<td>42</td>
<td>37</td>
<td>76</td>
<td>41</td>
</tr>
<tr>
<td>Academic Services</td>
<td>13</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Non-academic Activities</td>
<td>35</td>
<td>58</td>
<td>20</td>
<td>15</td>
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<tr>
<td>Cost of Student Facilities</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>X</td>
</tr>
<tr>
<td>Examinations</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td></td>
<td><em>(192191000)</em></td>
<td><em>(49125000)</em></td>
<td><em>(44734633)</em></td>
<td><em>(19625560)</em></td>
</tr>
</tbody>
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Table No. 3
Expenditure Pattern in Conventional & Open Learning System - 1988-89

<table>
<thead>
<tr>
<th></th>
<th>University of Delhi (%)</th>
<th>IGNOU (%)</th>
<th>U.G. Colleges (%)</th>
<th>School of Correspondence &amp; Continuing Education (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Academic Activities</td>
<td>43</td>
<td>46</td>
<td>74</td>
<td>40</td>
</tr>
<tr>
<td>2. Academic Services</td>
<td>14</td>
<td>5</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. Non-academic Activities</td>
<td>33</td>
<td>39</td>
<td>21</td>
<td>45</td>
</tr>
<tr>
<td>4. Cost of student facilities</td>
<td>9</td>
<td></td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>5. Examinations</td>
<td>1</td>
<td>10</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td></td>
<td>(<strong>18987000</strong>)</td>
<td>(<strong>8330000</strong>)</td>
<td>(<strong>28261472</strong>)</td>
<td>(<strong>2025560</strong>)</td>
</tr>
</tbody>
</table>
Analysis of the data reveals that though the two systems differ in character and in educational modes, yet the expenditure/cost patterns of the two systems are broadly comparable. Initially one finds that, institution representing the open learning system seems to be spending a higher percentage of its total budget on non-academic activities. But gradually, when the number of academic programmes, (launched/developed) increases the percentage of expenditure on non-academic activities declines and share of expenditure on academic activities to the total budget increases. Thus, as far as the expenditure pattern of the two systems are concerned, one does not find much difference during period under study (1986-87 to 1988-89).

Per Student Cost: The calculation of per student cost have been made for the institutions belonging to both the systems, i.e., open learning system and conventional education system. Indira Gandhi National Open University of the open learning system and the University of Delhi, its undergraduate colleges and School of correspondence education selected to represent the conventional education system in India.

It can be seen from Table No. 4 that as on 1986-87 and 1988-89 the University of Delhi had spent on an average Rs.9594 to Rs.11,978 per student annually for degrees/diplomas/certificates courses and post-graduate, undergraduate and post graduate, Ph.D. levels. Again in
Table No. 4

<table>
<thead>
<tr>
<th>Total per student cost in Conventional, Open learning Correspondence education in India</th>
<th>1986-87</th>
<th>1987-88</th>
<th>1988-89</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The University of Delhi</td>
<td>9594</td>
<td>11081</td>
<td>11978</td>
</tr>
<tr>
<td>2. Indira Gandhi National Open University</td>
<td>1911</td>
<td>1627</td>
<td>1838</td>
</tr>
<tr>
<td>3. Maintained Colleges of University of Delhi</td>
<td>4158</td>
<td>6270</td>
<td>5394</td>
</tr>
<tr>
<td>4. School of Correspondence and Continuing Education</td>
<td>667</td>
<td>821</td>
<td>715</td>
</tr>
</tbody>
</table>
this regard Indira Gandhi National Open University had spent on an average between Rs1911 to Rs. 1838 per student for degrees/diplomas/certificates courses during the same period i.e. 1986-87 to 1988-89. The undergraduate colleges of the University of Delhi offering B.A., B.Sc. and B.Com. courses spent, on an average, between Rs.4185 to Rs.5394 per student during the period under consideration. The average per student cost incurred by School of Correspondence Courses and Continuing Education, a system of distance education during 1986-87 to 1988-89, ranged between Rs.667 to Rs.715. The average per student cost figures for the year 1987-88 for the maintained colleges as well as the correspondence education, are high due to the release of the arrears of salary to the teaching and non teaching staff. As a matter of norm, one should have separated that sudden rise in cost due to release of arrears from the general teaching cost. But we could not do that because of the non availability of break-up of increase in teaching cost due to the release of arrears.

Data reveals that average per student cost was lowest for the School of Correspondence Courses and Continuing Education in India for all the three years, i.e., 1986-87 to 1988-89. This was followed by Indira Gandhi National Open University and then maintained colleges of the University of Delhi. The figures for the average per student cost for the University of Delhi were relatively higher due to the fact that most of the enrolment was for
the post-graduate levels. The interpretation of statistics about the average per student cost has to be accepted with some caution. For example the average per student cost of School of Correspondence Courses seems to be the lowest but detailed analysis of the budgets giving income and expenditure figures of the School of Correspondence Education indicates that the budget of this institution includes expenses of mainly teaching and internal non-teaching activities. The expenses for some of the items like establishment, general administration, common services and general charges were not included in the budget. These are given in the general budget of the University of Delhi and the School makes use of these facilities. Under such circumstances the general expenditure figures for the institute were similar to the budget of any other department of the University of Delhi which would definitely be lower than that of the expenditure figures of the University. Hence, the per student cost based on these expenditure figures were found to be low.

To overcome these limitations, we thought of attributing the expenditure of some of the facilities of the University of Delhi availed by the School of Correspondence Courses and Continuing Education, on the basis of weightage of its enrolment to the total enrolment strength of the University of Delhi.

But this exercise besides disturbing the whole expenditure structure of the School of Correspondence
Courses and Continuing Education was not found to be correct because students enrolled in this school do not claim the same facilities as the day scholars of the University claim.

To avoid these biases we based our average per student cost calculations on the expenditure figures (exclusive of general university non teaching expenditure) supplied by the School of Correspondence Education and accepted the outcome.

The Indira Gandhi National Open University followed School of Correspondence Courses and Continuing Education in terms of low average per student cost. The average per student cost for this University varied between Rs.1911 to Rs.1831 during 1986-87 to 1988-89. The average per student cost for the maintained colleges of the University of Delhi varied between Rs.4158 to Rs.5394 during the period under consideration except for the year 1987-88 when per student average cost for these colleges was Rs.6270. This rise in cost can be explained by a sudden rise in teaching cost due to release of a part of the salary arrears to the teachers. Therefore, hike in the per student average cost in 1987-88 is not to be taken as phenomenal, rather it was sudden and did not continue after that. In the University of Delhi the average per student cost ranged between Rs.9725 in 1986-87 to Rs.12156 in 1988-89. Apparently the comparison shows that higher per student cost was noticed in the University of Delhi. But this was due to the fact that the teaching done at the University of Delhi is quite different from that
of Indira Gandhi National Open University. Moreover due to the class room based teaching, enrolment is also controlled which leads to higher average per student cost. In contrast to this at the Indira Gandhi National Open University the increase in enrolment is an accepted phenomenon. One would expect a further fall in the average per student expenditure when the enrolment increases. This is the reason that conventional educational institutions, like Delhi University and the School of Correspondence Courses and Continuing Education have also shown a costing pattern, where average per student cost shows an increasing trend during the period under consideration i.e. 1986-87 to 1988-89. For the University of Delhi per student cost increased from Rs.9725 in 1986-87 to Rs.12156 in 1988-89. Similarly, the maintained colleges of the University of Delhi also showed an increase in average per student cost from Rs.4158 in 1986-87 to Rs.5394 in 1988-89. In the correspondence education the average per student cost increased from Rs.667 to Rs.715 during the same period. Pattern of increase in average per student cost can be explained in terms of correlation between increase in enrolment and increase in expenditure. Against this, the costing pattern of Indira Gandhi National Open University is such that the average per student cost declined as enrolment increased. The expenditure also increases every year but the increase in enrolment is much higher than the increase in expenditure. Therefore net result is a decline in average per student cost from Rs.1911 in 1986-87 to Rs.1838 during 1988-89.
Average per student cost by components: While calculating the per student cost, five major cost components which are common in both conventional and open learning system need to be considered. These five components are, Academic Activities which come under direct academic cost, academic services which come under indirect academic cost, non academic activities which belong to non academic cost and then staff and student facilities and examination costs. It can be seen from (Tables No. 5, 6 & 7) that a high portion of the budget of the institutions of conventional education system (i.e. the University of Delhi and its maintained colleges) goes for academic activities. For the year 1986-87 the average per student cost of this component as compared to others for above stated institutions was the highest i.e. Rs.4290 and Rs.3024 respectively. The situation was the same in the following two years, i.e., 1987-88 and 1988-89. The Institutions based on distance teaching methods i.e. the Indira Gandhi National Open University and School of Correspondence Education spend maximum amount on non academic activities. The per student cost of non-academic activities for IGNOU and School of Correspondence Courses are Rs.1469 and Rs.317 respectively. Situation was not much different in the other two years i.e. 1987-88 and 1988-89. The year 1987 was an exception because of payments of arrears of salaries in the School of Correspondence Courses and Continuing Education. Hence average per student cost on academic activities is higher
(Rs.394) than that of non academic activities (i.e., Rs.305). This may not be generally true. In general the School of Correspondence Education and IGNOU seem to be spending comparatively more on non academic activities during the years under consideration. In the IGNOU, because of initial stages of development, establishment cost is very high and the enrolment is also not sufficient to make the optimum use of overheads. As a result per student average cost is high and would continue to be so till the point of enrolment reaches at a higher level.

During 1986-87 on an average Delhi University spent around Rs.1257 on the academic services, namely library and documentation, computer, university instrumentation and graphic centres etc. The per student cost of this component increased to Rs.1257 in the year 1986-87 and Rs.1761 in the year 1988-89. The maintained colleges on an average spend Rs.84 per student on the academic services. The amount increased from Rs.84 in 1986-87 to Rs.100 in 1988-89. The average per student cost of academic services of the Indira Gandhi National Open University and School of Correspondence Education was Rs.31 and Rs.4 respectively. This cost component for the IGNOU was almost doubled (increased from Rs.31 to Rs.61) but did not increase much for the School of Correspondence Courses and Continuing Education for the three years period, i.e., 1986-87 to 1988-89 (see tables 2, 3 and 4). Staff and student facilities are provided only in the conventional education system. The simple reason is
that it is a cost for day scholars. Students spend a good amount of time in these educational institutions. Thus certain common facilities like canteen, hostels, medical centres, student's union office, scholarships, fellowships and other facilities for students are provided by the conventional, educational institutions. In 1986-87 the University of Delhi spent on an average Rs.866 on student’s facilities. The amount increased to Rs.1143 in the year 1988-89. The undergraduate colleges spent comparatively less on the student facilities. The average per student cost of student facilities varied between Rs.4 to Rs.17 during the years 1986-87 to 1988-89. In the year 1986-87 and 1987-88 the average per student cost of examination was the highest, i.e., Rs.106 for colleges. In 1988-89 Indira Gandhi National Open University had shown the highest average per student cost, i.e., Rs.66 for examination. For details see (Tables 5, 6 & 7). During the first year i.e. 1987-88 per student examination cost figures per this University were relatively low (i.e. Rs.52). During 1986-87 there was no examination. Whatever cost was incurred it was on the core staff of examination/evaluation division. In 1987-88 very few examination were conducted. It was only after 1988 that University had launched many courses and activities related to examination started. Thus first year i.e. in 1986-87 University spend negligible amount on examination. In the year 1987-88 cost was increased to Rs.52. In the third year it increased to Rs.66 per student.
Table No. 5

Per student cost by Components in Conventional & Open Learning System 1986-87

<table>
<thead>
<tr>
<th>Components</th>
<th>University of Delhi</th>
<th>IGNOU</th>
<th>U.G.Coll-</th>
<th>School of Correspondence &amp; Continuing Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Academic Costs</td>
<td>4290</td>
<td>407</td>
<td>3024</td>
<td>247</td>
</tr>
<tr>
<td>2. Indirect Academic Costs</td>
<td>1257</td>
<td>36</td>
<td>84</td>
<td>4</td>
</tr>
<tr>
<td>3. Non-academic Costs</td>
<td>3215</td>
<td>1469</td>
<td>940</td>
<td>317</td>
</tr>
<tr>
<td>4. Cost of student facilities</td>
<td>866</td>
<td>X</td>
<td>4</td>
<td>X</td>
</tr>
<tr>
<td>5. Examinations</td>
<td>98</td>
<td>X</td>
<td>106</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>9594</td>
<td>1911</td>
<td>4158</td>
<td>667</td>
</tr>
</tbody>
</table>
Table No. 6

Per student cost by Components in Conventional & Open Learning System 1987-88

<table>
<thead>
<tr>
<th>Components</th>
<th>University of Delhi</th>
<th>IGNOU</th>
<th>U.G. Colleges</th>
<th>School of Correspondence &amp; Continuing Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Academic Costs</td>
<td>4875</td>
<td>596</td>
<td>4793</td>
<td>334</td>
</tr>
<tr>
<td>2. Indirect Academic Costs</td>
<td>1501</td>
<td>31</td>
<td>97</td>
<td>6</td>
</tr>
<tr>
<td>3. Non-academic Costs</td>
<td>3683</td>
<td>939</td>
<td>900</td>
<td>305</td>
</tr>
<tr>
<td>4. Cost of student facilities</td>
<td>1083</td>
<td>-</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5. Examinations</td>
<td>105</td>
<td>52</td>
<td>112</td>
<td>107</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11081</strong></td>
<td><strong>1627</strong></td>
<td><strong>6270</strong></td>
<td><strong>821</strong></td>
</tr>
</tbody>
</table>
Table No. 7

Per student cost by Components in Conventional & Open Learning System 1988-89

<table>
<thead>
<tr>
<th>Components</th>
<th>University of Delhi</th>
<th>IGNOU</th>
<th>U.G.Coll- eges</th>
<th>School of Correspondence &amp; Continuing Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Academic Costs</td>
<td>5166</td>
<td>839</td>
<td>3996</td>
<td>280</td>
</tr>
<tr>
<td>2. Indirect Academic Costs</td>
<td>1761</td>
<td>85</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>3. Non-academic Costs</td>
<td>3969</td>
<td>732</td>
<td>1172</td>
<td>312</td>
</tr>
<tr>
<td>4. Cost of student facilities</td>
<td>1143</td>
<td>-</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>5. Examinations</td>
<td>113</td>
<td>66</td>
<td>107</td>
<td>102</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11978</strong></td>
<td><strong>1727</strong></td>
<td><strong>5394</strong></td>
<td><strong>715</strong></td>
</tr>
</tbody>
</table>
The School of Correspondence Courses and Continuing Education on the same activity (i.e. examination in the years 1986-87 to 1988-89) spent between Rs. 98 to 102 per student on the same activity (i.e. examination in the years 1986-87 to 1988-89).

In the end, one can say that the two systems i.e. conventional represented by the University of Delhi and open learning represented by the Indira Gandhi National Open University differ distinctively from each other in terms of characteristic features. Yet there was a similarly in the cost structures of the two systems. So much so that the expenditure patterns of the two systems were also found to be quite similar.

A comparison of per unit cost of providing education through open learning system to that of conventional education system in India during the period, 1986-87 to 1988-89 revealed that the unit cost of providing education through open learning system is less constlier than that of providing education through the conventional education system.