Students' Pass Rates: A Case Study of Indira Gandhi National Open University Programmes

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Abstract: *This article makes a serious and scientific attempt to develop appropriate formulae and to apply them for finding out the students' pass out rates for different academic years of different programmes of IGNOU. The minimum and maximum durations prescribed for completion of different programmes vary widely. Sequel to it, the students admitted to a programme in different academic years will be completing the minimum and maximum durations in different years. The students admitted to a programme may therefore pass it out in any year between the respective minimum and maximum durations and the pass outs are accordingly spread over different years. Once the first batch of students of a programme completes minimum duration, the students start passing out every year till the completion of maximum duration by that batch. Meanwhile, the students from successive batches of that very programme also complete the minimum duration and start passing out every year. Thus, the pass outs of a given programme of a given year include the pass outs from students admitted in different academic years. The cohort of students on rolls forming a base group for the pass outs of every year are also spread over a few years. For arriving at the figures of cohort of students on rolls in every successive year, the number of students who have already passed out in the previous year(s) should be deducted from the enrolment of respective year(s), and wherever applicable the remaining students of particular batch(es) who have completed the maximum duration of the programme should also be deducted from the cumulative enrolment of cohort years. Because of these complications linked to the flexibility in duration allowed for completion of the programmes, calculating the students pass rates for different academic years of different programmes has been a difficult task, which the author accomplishes in this article.*

Background

Indira Gandhi National Open University, popularly known as IGNOU, was established in 1985 by an Act of Parliament. It started its academic life in 1987 by offering Diploma in Distance Education (DDE) and Diploma in Management (DIM) programmes. Thereafter, every subsequent year it has been offering new programmes, besides continuing *most* of the old ones already on offer. Thus, as of January, 2001 there are 62 programmes on offer (IGNOU, 2001). These programmes may carry different credits and lead to different certificates, diplomas (graduate/advanced/post-graduate), degrees (graduate/post-graduate) and Ph.D. There are some programmes which are non-credit programmes and do not lead to any kind of certification. In case of all the credit

programmes one can notice that the programme title indicates in itself the level of the programme. The programmes are of different durations with different minimum and maximum periods for completion. This means, the students admitted to a programme are *not* allowed to obtain respective certificate, diploma or degree till they complete the minimum duration and after they complete the maximum duration prescribed for that programme. The credit programmes *currently on offer* along with their level, codes, year of offer/launch, and minimum and maximum durations are given in Table 1.

Table 1: Level, title, code, year of offer/launch, and minimum and maximum durations of programmes

S. No.	Level and title of Programme	Programme code	First year of offer/ launch	Duration (in years) Min.	Max.
I	**Ph. D Programmes**				
1	Doctor of Philosophy in Education (Phase - I)	PhD	2001	2	4
II	**Master's Programmes**				
1	Master of Business Administration	MBA	1987	3	No bar
2	Master of Arts in Distance Education	MADE	1993	1	4
3	Master in Library and Information Sciences	MLISc	1994	1	4
4	Master in Computer Applications	MCA	1997	3	7
5	Master of Business Administration (Banking and Finance)	MPBF	1999	3	No bar
6	Master in Tourism Management	MTM	2000	2	4
7	Master of Arts in English	MEG	2001	2	6
III	**Bachelor's Programmes**				
1	Bachelor's Preparatory Programme	BPP	1988	6 months	2
2	Bachelor of Arts	BA	1988	3	8
3	Bachelor of Commerce	BCom	1988	3	8
4	Bachelor in Library and Information Sciences	BLISc	1990	1	4
5	Bachelor of Science	BSc	1992	3	8
6	Bachelor of Science in Nursing	BScN	1994	3	5
7	Bachelor in Tourism Studies	BTS	1995	3	8
8	Bachelor in Computer Applications	BCA	1996	3	6
9	Bachelor of Technology in Civil (Construction Management)	BTCM	1999	4	10
10	Bachelor of Technology in Civil (Water Resources Management)	BTWRE	1999	4	10

11	Bachelor of Education	BEd	2000	2	4
12	Bachelor in Information Technology	BIT	2000	3	6
IV	**Diplomas**				
1	Diploma/Post-graduate Diploma in Distance Education	DDE/PGDDE	1987/1993	1	4
2	Diploma in Management	DIM	1987	1	2 1/2
3	Post-graduate Diploma in Management	PGDIM	1988	1	2 1/2
4	Diploma in Creative Writing in English	DCE	1988	1	4
5	Post-graduate Diploma in Financial Management	PGDFM	1990	1	2 1/2
6	Post-graduate Diploma in Human Resource Management	PGDHRM	1990	1	2 1/2
7	Post-graduate Diploma in Marketing Management	PGDMM	1990	1	2 1/2
8	Post-graduate Diploma in Higher Education	PGDHE	1992	1	4
9	Diploma/Post-graduate Diploma in Rural Development	DRD/ PGDRD	1992	1	4
10	Diploma in Creative Writing in Hindi	DCH	1993	1	4
11	Post-graduate Diploma in Operations Management	PGDOM	1993	1	2 1/2
12	Diploma in Nutrition and Health Education	DNHE	1994	1	4
13	Post-graduate Diploma in Computer Applications	PGDCA	1994	1	4
14	Diploma in Early Childhood Care and Education	DECE	1995	1	4
15	Diploma in Tourism Studies	DTS	1996	1	4
16	Post-graduate Diploma in Journalism and Mass Communication	PGJMC	1996	1	4
17	Post-graduate Diploma in Maternal and Child Health	PGDMCH	1998	1	3
18	Advanced Diploma in Tourism Studies	ADTS	1998	1	3
19	Post-graduate Diploma in Translation	PGDT	1999	1	4
20	Advanced Diploma in Information Technology	ADIT	2000	1	2
21	Post-graduate Diploma in Hospital & Health Management	PGDHHM	2001	1	3
22	Post-graduate Diploma in International Business Operations	PGDIBO	2001	1	3
23	Diploma in Primary Eduation	DPE	2001	2	6

V   Certificates

1	Certificate in Rural Development	CRD	1988	6 months	2
2	Certificate in Food and Nutrition	CFN	1989	6 months	2
3	Certificate in Guidance	CIG	1993	6 months	2
4	Certificate in Tourism Studies	CTS	1994	6 months	2
5	Certificate in Computing	CIC	1996	6 months	2
6	Certificate in Teaching of English	CTE	1997	6 months	2
7	Certificate in Nutrition and Child Care	CNCC	1997	6 months	2
8	Certificate in Environmental Studies	CES	1998	6 months	2
9	Post-graduate Certificate in Radio Writing	PGCR	1999	6 months	2
10	Certificate in Disaster Management	CDM	1999	6 months	2
11	Certificate in Participatory Forest Management	CPFM	1999	6 months	2
12	Commonwealth Youth Programme	CYP	2000	6 months	2
13	Certificate in Consumer Protection	CCP	2001	6 months	2
14	Certificate in Empowering Women's Self-help Groups	CWDL	2001	6 months	2
15	Preparatory Programme in Computing	PPC	2001	6 months	2
16	Certificate in Human Rights	CHR	2001	6 months	2
17	Certificate in Labour in Development	CLD	2001	6 months	2
18	Certificate in Teaching of Primary School Mathematics	CTPM	2001	6 months	2
19	Certificate in Women's Empowerment and Development	CWED	2001	6 months	2
20	Certificate in Participatory Project Planning or Sahabhagi Vikas Yojana	CPP/ SAVINI	2001	6 months	2

Table 2 presents the students enrolment, students on roll and pass outs every year and also their annual growth rate from 1987 to 2001. The Vice-chancellor's Reports presented at IGNOU Convocations, First (1989) to Twelfth (2001) and the Annual Reports (1988-89 to 1999-2000) of the University formed sources of data presented in this Table. It may be remembered that no convocation was held in the year 1990.

Table 2: Growth in student enrolment and pass outs in IGNOU: 1987-2001

| Academic Year (as on 1st January) | No. of Students (in thousands) | | | Annual Growth Rate in studetns | | |
	Enrolled	On rolls	Passed out	Enrolled	On rolls	Passed out
1987	4.381	—	—	—	—	—
1988	16.811	20.81	NA	283.73	—	—
1989	42.324	61.72	1.17 (5.62)	151.76	196.59	—

1990	48.281	103.87	NA	—	14.07	68.29	NA
1991	52.376	112.19	3.81	(3.67)	8.48	8.01	225.64*
1992	62.375	145.00	4.91	(4.98)	19.09	29.25	28.87
1993	75.666	182.37	4.44	(3.06)	21.31	25.77	-9.57
1994	78.693	222.80	7.58	(4.16)	4.00	22.17	70.72
1995	91.398	242.00	9.25	(4.15)	16.15	8.62	22.03
1996	130.228	310.00	11.40	(4.71)	42.48	28.10	23.24
1997	162.540	394.39	16.20	(5.23)	24.81	27.22	42.11
1998	163.394	430.83	25.20	(6.39)	0.53	9.24	55.56
1999	172.548	516.58	33.10	(7.68)	5.60	19.90	31.35
2000	196.650	561.17	53.30	(10.32)	13.97	8.63	61.03
2001	291.360	750.87	62.37	(11.11)	48.16	33.80	17.02

Sources: 1. IGNOU (1989-2001). IGNOU Convocations (First to Twelfth): Vice-chancellor's Reports.
2. IGNOU (1988-2000). IGNOU Annual Reports 1988-89 to 1999-2000.

Notes: 1. Students enrolled for July academic session of certificate programmes in the preceeding year are included in the students enrolled figures shown against the succeeding year.
2. Pass outs shown against a year includes the pass outs of even certificate programmes who are issued certificates through out the year irrespective of convocations.
3. Figures in the parentheses indicate the percentage of pass outs to the students on rolls in the previous year
* Growth rate over the pass outs of the year 1989.

Table 2 shows that starting with 4,381 students enrolled for different programmes in 1987 the enrolment in 2001 rose to 291,360. The total number of students on rolls as on 01.01.2001 is 750,873. Similarly, starting with 1.17 thousand pass outs of all the programmes put together in 1989 the figure rose to 62.37 thousands in 2001. Thus, there has been tremendous increase in the annual enrolment and also in the number of pass outs every year. It also gives an indication of pass rate or percentage of students of IGNOU which has been very low. It means, that on average the dropouts and failures put together account for about 94% of students on rolls. These percentages however give general picture of the students pass rate in relation to the total number of students on rolls of the University. The major findings from the table are that:

i) The absolute number of students admitted/enrolled, those on rolls and the pass outs has been increasing every year except, in the year 1993 when the number of pass outs has decreased.

ii) The annual growth rates in annual enrolment of students, the students on rolls and the pass outs have been positive. But the annual growth rate in the case of students enrolled has been fluctuating and it ranged between 0.53 and 283.73 (range = 283.20), in the case of students on rolls, it ranged between 8.01 and 196.59 (range = 188.58), and in the case of pass outs it ranged between -9.57 and 225.64 (range = 235.21).

iii) The percentage of pass outs to the total number of students on rolls in the previous academic year has been between 3.06 and 11.11 (range = 8.5). The average pass

percentage to the number of students on rolls in the previous year is 5.92 only. The decrease in percentage of pass outs in 1993 is in correspondence with negative growth rate in pass outs in the year 1993. Though the pass percentage has been fluctuating till 1994, it has been on the increase thereafter till 2001.

The above pass out rates can be said to be crude for mainly two reaons. Firstly, the students on rolls in the previous year (used for calculating pass out rate) includes the students of the programmes which have been launched in that year itself and of those programmes which have not completed respective minimum durations prescribed for them. Secondly, there are a few programmes which could not produce any pass out despite completion of minimum duration by one or more batches of students. Also these crude pass rates do not give any indication of students' pass rates of different programmes of the University. Therefore, it is important to calculate the pass rates of students of each individual programme.

Significance

It may be noted that calculating the pass out rates of students of different programmes is a difficult task because of flexibility in duration for completion of these programmes. Moreover, the minimum and maximum durations prescribed for different programmes vary widely. These differential durations further complicate the task of calculating the pass out rates for different years. The students admitted to an academic programme may pass it in any year between the respective minimum and maximum durations and the pass outs are spread over different years. Thus, the students admitted in different academic years will be completing their minimum and maximum durations at different times, according to their year of admission. Once the first batch of students of a programme completes minimum duration, the students start passing out the programme every year till the completion of maximum duration by that batch. Thus, once a few batches of students complete the minimum period prescribed for a programme, the pass outs of that programme in a given year will include the pass outs from students admitted in different academic years which forms a cohort of students on role. In such a situation, arriving at the total number of cohort of students on rolls minus the pass outs from particular academic year(s) becomes more difficult. Therefore, for arriving at the actual figure of cohort of students on rolls which formed a base for the pass outs of a given year, the number of students who have already passed out in the previous year(s) and the remaining students of the relevant batche(s) who have completed their maximum duration should be deducted from the cumulative enrolment of the cohort years. Thus, calculating the pass out rate of each year of each programme is very complicated task. Perhaps, because of these complications involved, there has been no systematic study conducted so far to calculate the pass rate of students for different academic years of different programmes. Therefore, it is necessary to develop and apply appropriate formulae for finding out the pass out rates of students of different academic programmes for different academic years starting from 1987.

Objectives

The objectives of this article are:

i) to develop appropriate formulae for finding out the pass rates (percentages) of students of different academic years of different programmes of the University;

ii) to calculate the pass rates of the students of different academic years of different programmes of the University by applying the different formulae specially developed under objective i) above; and

iii) to find out and compare average pass out rates of students of different programmes along with their ranks.

The basic requirement for accomplishing the above objectives is the availability of data on enrolment of students for each academic year right from the first year of offer/ launch of each programme and the students who have passed out from each programme every year after completion of the minimum duration of each programme. The secondary data on year-wise enrolment and number of pass outs of each programme as available from the Vice-chancellor's Convocation Reports and the Annual Reports of the University (IGNOU, 1989-2001) have been collected and used for calculating the pass out rates or percentages for each year of each programme shown in Table 3. *It may be noted that the year under which the enrolment data starts against a programme in Table 3 is the first academic year or launch year of the programme.* The data on students who passed out respective programmes after completion of prescribed minimum durations are shown against the immediately succeeding year as per available records mentioned above.

Development of Formulae for Calculating Pass Out Rates or Percentages

Different formulae have been developed for calculating students pass rates for different academic years of different programmes depending upon their minimum and maximum durations. *Here, it is very important to note that though the first batch students of some of the programmes have not yet completed the prescribed maximum duration of the programmes, the relevant formulae developed below can be used for calculating students pass rate for any future academic year of the respective programmes.*

i) Formulae for programmes with 6 months as minimum and 2 years as maximum durations

The minimum and maximum duration of all the certificate programmes is 6 months and 2 years respectively. Unlike all other programmes, the students to these programmes are admitted twice a year for the two academic sessions, one starting from 1st January and the other from 1st July of every academic year. These students can pass a particular programme in the relevant session(s) of the same year in which they are admitted and even the certificates can be issued to them in the same year itself. Subject to the maximum duration, the students can complete a particular programme within two years from the date of commencement of their respective academic session. The students of a particular certificate programme start passing out after completion of the minimum period of 6

months. But all pass outs of the entire year (e.g. 1st year) are shown in the following year only i.e. all the pass outs of 1st academic year are shown under 2nd academic year, all the pass outs of 2nd academic year are shown under 3rd academic year and so on. It means the data of the successfully completed students from among the students admitted in an academic year are found under the pass outs of two successive years of the programme. Also, the pass outs shown under 2nd academic year of the programme include the pass outs from among the students enrolled in the 1st academic year only while those shown under 3rd academic year include the pass outs of the students enrolled in the 1st and 2nd academic years. Therefore, while calculating the pass out rates for second and third academic years of these programmes the total number of cohort of students on rolls for the respective years can be arrived at by deducting the number of students who have already passed out in the corresponding previous academic year(s), as the case may be.

Thus, the students pass out rates for the 2nd and 3rd academic years (PRy_2 and PRy_3) of any given certificate or other programmes with 6 months and 2 years as minimum and maximum durations can be respectively calculated by using the formulae (1) and (2) given below.

$$PRy_2 = \frac{Py_2}{Ey_1} \times 100 \qquad \qquad ...(1)$$

$$PRy_3 = \frac{Py_3}{(Ey_1 + Ey_2) - Py_2} \times 100 \qquad \qquad ... (2)$$

Where

Py_2	=	Pass outs shown under second academic year of the particular programme
Py_3	=	Pass outs shown under third academic year of the particular programme
Ey_1	=	Student enrolment of the first academic year of the programme
Ey_2	=	Student enrolment of the second academic year of the programme

Since the students enrolled in first academic year complete maximum period of 2 years by the end of second academic year of the programme the pass outs from the students of the 1st academic year are spread over or included among the pass outs shown under the 2nd and 3rd academic years of that particular programme. But, the pass outs shown under 4th academic year will not have any pass outs from among the students enrolled in the 1st academic year (except those of July session, as mentioned above), the pass outs shown under 5th academic year will not have any pass outs from the students enrolled in 1st and 2nd academic years (except those of respective July sessions, as mentioned above) and so on, because they would have completed the maximum duration of 2 years and would be automatically removed from the rolls of the programme. Here, it is important to note that the students admitted for the July sessions of the 1st, 2nd... academic years may pass out in the 3rd, 4th, ... academic years and hence are also included among the pass outs shown under 4th, 5th, ... academic years respectively. It is thus clear that the net effect of such inclusion of pass outs in any year can be treated as nil. Therefore, while calculating the percentage of pass outs of the programme, the

total number of cohort of students on rolls of the relevant academic year should be arrived at after deducting the students who have already passed out in the previous year and the remaining students of the relevant batch(es) who have already completed the prescribed maximum period of two years. So, students pass out rate (percentage) of students for any academic year, 4th to nth, of any given certificate or other programmes with minimum and maximum duration of 6 months and 2 years can be calculated as follows.

$$PRyn = \frac{Pyn}{(Eyn-_2 + Eyn-_1) - Pyn-_1} \times 100 \qquad \dots (3)$$

Where

Pyn = Pass outs shown under nth academic year of the programme

$Pyn-_1$ = Pass outs shown under the academic year immediately preceding the nth year of the programme

$Eyn-_1$ = Enrolment in the academic year immediately preceding the nth academic year, yn, of the programme.

$Eyn-_2$ = Enrolment in an academic year which precedes the nth academic year, yn, by two academic years of the programme.

The formulae (1), (2) and (3) have been used and applied for calculating the pass out rates (percentages) of CFN, CIG, CTS, CIS, CTE, CES, CDM, CPFM and BPP programmes. *It may be noted here that other certificate programmes do not find a place in Table 3 because either they have not completed the minimum duration yet or they have not produced any pass out even after completion of minimum duration. It may also be noted that BPP has the same minimum and maximum duration as that of certificate programmes.*

ii) Fromulae for programmes with 1 year as minimum duration and 2 1/2, 3 or 4 years as maximum durations

There are diploma, advanced diploma and post-graduate diploma programems which have the minimum and maximum duration of one year and 2 1/2 or 3 years respectively. It may be noted that except for certificate programmes an academic year of all other programmes starts from 1st January of the year and ends on 31st December of the same year. So, of the students admitted to the first academic year of a given diploma programme some may pass out in the first academic year itself, some may pass out in the second academic year, some others may pass out in the third year. In this context, the maximum duration of 2 1/2 or 3 years does not make any difference because the students who pass out after the maximum durations get the relevant diploma in 4th year only (i.e. in the relevant convocation) and hence are shown under the pass outs of the 4th academic year of that particular diploma. Here, it may be noted that their enrolment year is the same. Therefore, the pass outs of any one of these programmes are found under the second academic year onwards. It means that the pass outs shown under the 2nd academic year of the programme include the pass outs from among the students enrolled in the first academic year only, while those shown under the 3rd acdemic year include the

pass outs from the students enrolled in the 1st and 2nd academic years also. Thus, the pass rate for the 2nd and 3rd cademic years of any one of these diploma programmes can also be respectively calculated by using formulae (1) and (2) above.

It follows that the pass outs shown under the 4th academic year include the pass outs from among the students enrolled in 1st, 2nd and 3rd academic years as well. Therefore, while calculating the pass out rate for 4th academic year of these programmes the cohort number of studetns on rolls who formed the base group for pass outs of respective academic years can be arrived at by deducting the number of students who have already passed out in the corresponding previous academic year(s), as the case may be. Accordingly, the pass rate for the 4th academic year (PRy_4) of these programmes can be calculated as follows.

$$PRy_4 = \frac{Py_4}{(Ey_1 + Ey_2 + Ey_3) - (Py_2 + Py_3)} \times 100 \qquad \text{...(4)}$$

Since the students enrolled in the first academic year complete maximum period of 3 years by the end of third academic year of the programme the pass outs from the students of the 1st academic year are spread over or included among the pass outs shown under the 2nd to 4th academic years of that particular programme. But, the pass outs shown under 5th academic year will not have any pass outs from among the students enrolled in the 1st academic year, the pass outs shown under 6th academic year will not have any pass outs from the students enrolled in 1st and 2nd academic years and so on, because they have already completed the maximum duration of three years and are automatically removed from the rolls of the relevant programme. It means, while calculating the pass out rates for different academic years of the programmes with 1 year minimum duration and 2 1/2, 3 or 4 years as the maximum duration, the total number of cohort of students on rolls for relevant academic years can be arrived at by deducting not only the number of students who have already passed out in the correspoonding previous academic year(s) but also those batch(es) that have already completed the respective maximum duration of the relevant programme.

Hence, the pass rate of students for any academic year, 5th to nth, of any given academic programme with minimum and maximum duration of 1 and 2 1/2 or 3 years respectively can be calculated as follows.

$$PRyn = \frac{Pyn}{(Eyn_{-3} + Eyn_{-2} + Eyn_{-1}) - (Pyn_{-2} + Pyn_{-1})} \times 100 \qquad \text{... (5)}$$

Where, in the above formulae (1), (2), (4) and (5)

PRy_2, PRy_3, PRy_4, ..., and $PRyn$ stand for the pass out rates (percentages) of the 2nd, 3rd, 4th, and nth academic years respectively of the particular programme.

Ey_1, Ey_2, Ey_3, ..., Eyn stand for the enrolment in the 1st, 2nd, 3rd, ...nth academic years respectively of a given programme.

Eyn_{-3}, Eyn_{-2} and Eyn_{-1} stand for enrolment in the academic years preceding 3, 2 and 1 year(s) the nth academic year respectively of a given programme. *The above notations also hold equally good to other formulae that follow hereafter.*

Formulae (1), (2), (4) and (5) have been applied for calculating the pass out rates for DIM, ADIM, PGDIM, PGDFM, PGDHRM, PGDMM, PGDOM and PGDMCH.

There are some diploma, post-graduate diploma, Bachelor's and Master's programmes with 1 and 4 years as minimum and maximum durations respectively. It is therefore clear that the students pass rates for 2nd, 3rd and 4th academic years of these programmes can as well be respectively calculated by applying the formulae (1), (2), and (4) above. Similarly, it may be noted that the pass outs shown under 5th academic year of a programme include the pass outs from among the students enrolled for 1st, 2nd, 3rd and 4th academic years. So the pass rate for the 5th academic year of thes programmes (PRy_5) can be calculated by using the following formula.

$$PRy_5 = \frac{Py_5}{(Ey_1 + Ey_2 + Ey_3 + Ey_4) - (Py_2 + Py_3 + Py_4)} \times 100 \qquad \text{...(6)}$$

But, the pass outs shown under 6th academic year will not have any pass outs from among the students enrolled in the 1st academic year, the pass outs shown under 7th academic year will not have any pass outs from the studetns enrolled in 1st and 2nd academic years and so on, because they have already completed the maximum duration of four years and are automatically removed from the rolls of the relevant programme. It follows that for the programmes with minimum and maximum durations of 1 and 4 years the pass out rate for any academic year, 6th to nth, can be calculated by using the following formula.

$$PRyn = \frac{Pyn}{(Eyn_{-4} + Eyn_{-3} + Eyn_{-2} + Eyn_{-1}) - (Pyn_{-3} + Pyn_{-2} + Pyn_{-1})} \times 100 \qquad \text{...(7)}$$

The above formulaey (1), (2), (4), (6) and (7) have been applied for calculating the pass out rates of students of DCE, DCO, DCH, DNHE, PGDCA, DECE, DTS, BLISc, DDE/PGDDE, PGDHE, DRD/PGDRD, PGJMC, PGDT, MADE, and MLISC programmes which have minimum and maximum duration of 1 and 4 years respectively.

iii) Formulae for programmes with 3 years as minimum duration and 5, 6, 7 or 8 years as maximum duration

The students admitted to the first academic year of a programme (e.g. BScN) with 3 and 5 years minimum and maximum durations respectively would start passing out the programme after completion of the minimum duration of three years by the first batch of the students i.e. the pass outs are found under 4th academic year of the programme onwards. They may pass it out in either 3rd, 4th, or 5th academic year of the programme and are accordingly included in the pass outs shown under 4th, 5th and 6th academic years. While the pass outs shown under the 4th academic year are totally from the stuents admitted in the first academic year of the programme only, the pass outs shown under 5th academic year include the pass outs from the students admitted in the 1st and 2nd academic years and the pass outs shown under the 6th academic year include the pass outs from the students admitted in 1st, 2nd and 3rd academic years as well. Hence, while calculating pass out rates for 4th, 5th and 6th academic years of the programme,

the cohort group of students on rolls who form a base group for the pass outs of the respective year should be arrived at by deducting the students already pass out in the previous year(s). Thus, the students pass rates for the 4th, 5th and 6th academic years (PRy_4, PRy_5 and PRy_6) of BScN and other programmes, if any, with 3 and 5 years as minimum and maximum durations can be respectively calculated by applying the formulae (8), (9) and (10) given below

$$PRy_4 = \frac{Py_4}{Ey_1} \times 100 \qquad \qquad \text{... (8)}$$

$$PRy_5 = \frac{Py_5}{(Ey_1 + Ey_2) - Py_4} \times 100 \qquad \qquad \text{... (9)}$$

$$PRy_6 = \frac{Py_6}{(Ey_1 + Ey_2 + Ey_3) - (Py_4 + Py_5)} \times 100 \qquad \qquad \text{...(10)}$$

However, it may be noted that the pass outs shown under the 7th academic year of the programme do not include any pass out from the students admitted in the 1st academic year and the pass outs shown under 8th academic year do not include any pass out from students admitted in the 1st and 2nd academic years and so on. And hence, while calculating pass out rates for any academic year, from 7th to nth, of the programme with 3 and 5 years as minimum and maximum durations, the cohort group of students on rolls of any particular academic year who form a base group for the pass outs of the relevant year should be arrived at by deducting not only the students already passed out in the previous year(s) but also the studetns of those batch(es) which have already completed the maximum duration of the programme. Therefore, the pass rate for any academic year (7th to nth) of BScN and other programmes, if any, with minimum and maximum duration of 3 and 5 years can be calculated as follows.

$$PRyn = \frac{Pyn}{(Eyn -_5 + Eyn -_4 + Eyn -_3) - (Pyn -_2 + Pyn -_1)} \times 100 \qquad \qquad \text{...(11)}$$

It may be noted that even for programmes with 3 and 6 years as minimum and maximum durations (e.g. BCA) the formulae (8), (9) and (10) above are equally applicable for calculation of pass rates of 4th, 5th and 6th academic eyars. But, the pass outs shown under the 7th academic year include the pass outs from among the students admitted in 1st to 4th academic years. So, the pass rate for the 7th academic year (PRy_7) of these programmes can be calculated by using the following formula.

$$PRy_7 = \frac{Py_7}{(Ey_1 + Ey_2 + Ey_3 + Ey_4) - (Py_4 + Py_5 + Py_6)} \times 100 \qquad \qquad \text{... (12)}$$

But, the pass outs shown under 8th academic year of these programme do not include any pass out from the stuents admitted in the 1st academic year and the pass outs shown under 9th academic year do not include any pass out from students admitted in 1st and 2nd academic years and so on. So, the pass rate for any academic year, 8th to nth, of BCA and other programmes, if any, with minimum and maximum duration of 3 and 6 years can be calculated as follows.

$$PRyn = \frac{Pyn}{(Eyn-_6 + Eyn-_5 + Eyn-_4 + Eyn-_3) - (Pyn-_3 + Pyn-_2 + Pyn-_1)} \times 100$$

$$...(13)$$

It follows that even in the case of programmes with 3 and 7 years as minimum and maximum durations (e.g. MCA) the formulae (8), (9), (10) and (12) above are equally applicable for calculation of pass rates for the 4th, 5th, 6th, and 7th academic years respectively. But, it may be noted that the pass outs shown under the 8th academic year of these programmes include the pass outs from among the students admitted in 1st to 5th academic years. So, the pass rate for the 8th academic year (PRy_8) of these programmes can be calculated by using the following formula.

$$PRy_8 = \frac{Py_8}{(Ey_1 + Ey_2 + Ey_3 + Ey_4 + Ey_5) - (Py_4 + Py_5 + Py_6 + Py_7)} \times 100 \qquad ...(14)$$

But, the pass outs shown under 9th academic year of these programmes do not include any pass out from the students admitted in the 1st academic year and those shown under 10th academic year do not include any one from students admitted in 1st and 2nd academic years and so on. So, the pass out rate for any academic year, 9th to nth, of MCA and other programmes, if any, with minimum and maximum duration of 3 and 7 years can be calcualted as follows.

$$PRyn = \frac{Pyn}{(Eyn-_7 + Eyn-_6 + Eyn-_5 + Eyn-_4 + Eyn-_3) - (Pyn-_4 + Pyn-_3 + Pyn-_2 + Pyn-_1)} \times 100$$

$$...(15)$$

Now, let us take the programmes with 3 and 8 years as minimum and maximum durations (e.g, BA, BCom, BSc, BTS, etc). Even in the case of these programmes the formulae (8), (9), (10), (12), and (14) above are equally applicable for calculation of pass rates for the 4th, 5th, 6th, 7th and 8th academic years respectively. But, it may be noted that the pass outs shown under the 9th academic year of these programmes include the pass outs from among the students admitted in 1st to 6th academic years as well. So, the pass rate for the 9th academic year (PRy_9) of these programmes can be calcualted by using the following formula.

$$PRy_9 = \frac{Py_9}{(Ey_1 + Ey_2 + Ey_3 + Ey_4 + Ey_5 + Ey_6) - (Py_4 + Py_5 + Py_6 + Py_7 + Py_8)} \times 100$$

$$...(16)$$

But, it may be noted that the pass outs shown under 10th academic year of these programmes do not include any pass out from the students admitted in the 1st academic year and those shown under 11th academic year do not include any one from students admitted in the 1st and the 2nd academic years and so on. So, the pass out rate for any academic year, 10th to nth, of programmes with minimum and maximum duration of 3 and 8 years can be calculated as follows.

$$PRyn = \frac{Pyn}{(Eyn_{-8} + Eyn_{-7} + Eyn_{-6} + Eyn_{-5} + Eyn_{-4} + Eyn_{-3}) - (Pyn_{-5} + Pyn_{-4} + Pyn_{-3} + Pyn_{-2} + Pyn_{-1})} \times 100$$

$$...(17)$$

iv) Special note on the management programmes

From 1987 to 1991 moudlar approach was followed with initial admission done for DIM through entrance test mode. These students, in phased manner, obtain DIM, ADIM, PGDIM and MBA. From 1992 onwards the admissions started under Management Programme (MP) with a provision for course-wise registration. Also, from 1991 onwards, there had been direct admission without entrance test to Specialised Diploma Programmes, namely PGDFM, PGDHRM and PGDMM and from 1993 to PGDOM as well. This practice was, however, stopped in 1997. From 1998 onwards, the admission of students continued under MP only and these students can obtain DIM, ADIM, PGDIM or any specialised Diploma in Management or MBA depending upon the number and type of prescribed courses they complete without any bar on maximum duration.

As explained elsewhere, for DIM, ADIM, PGDIM, PGDFM, PGHRM, PGDMM and PGDOM programmes the minimum and maximum durations till 1997 were 1 year and 2 1/2 years respectively and the students pass rates for different academic years of these programmes have been calculated by applying the formulae (1), (2), (4) and (5) above.

However, for MBA, minimum duration is three years whereas there is no bar on the maximum duration for its completion. It may be recalled that some Bachelor's programmes namely, BA, BCom, B.Sc, etc. have 3 years as minimum duration like MBA, but there is a limit on the maximum duration of these programmes i.e. 8 years. Therefore, the same formulae that have been applied to BA, BCom or BSc programme have also been applied to MBA for calculating the pass out rates to the 9th academic year, which includes the pass outs from the students admitted in 1st to 8th academic years. Since there is no maximum duration for MBA and all the students continue to be potentially on rolls for one or the other management coruse the pass rate for any academic year, from 10th to nth, has been calculated by applying the following formula.

$$PRyn = \frac{Pyn}{(Ey_1 + ... \; Eyn_{-3}) - (Py_1 + ... + Pyn_{-1})} \times 100 \qquad ...(18)$$

As mentioned earlier, the notations of Ey_1, ..., Eyn and Py_1, ..., Pyn_{-1}, Pyn in the above formula mean the same as in the case of all other formulae above.

Thus, keeping in view the minimum and maximum durations of different programmes, appropriate formulae have been developed and applied for calculating the percentage of pass outs for different academic years of various programmes. The pass out rates thus obtained can be found in Table 3. *Here, it is very important to note that the programmes which have been launched recently and therefore have not completed their minimum duration and also the programmes from which there are no pass outs, even after the completion of the minimum period, from any batch(es) of students do not find a place in Table 3.*

Table 3: Students enrollment, pass outs and percentage of pass outs of different academic programems of IGNOU: 1987-2001

S. No. Programme		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Certificate																
1. CFN	E			2548	2122	2919	5655	5957	3376	2865	2432	1391	757	722	530	879
	P				531	531	793	467	1461	847	654	605	382	312	417	209
	%				20.84	12.83	12.15	4.10	8.78	5.58	4.34	5.19	4.80	5.38	7.86	9.13
2. CIG	E							1081	801	782	628	511	367	518	507	860
	P								N.A.	113	109	149	148	99	94	175
	%									6.00	7.41	11.45	14.95	13.56	11.96	18.80
3. CTS	E									2186	833	568	278	239	200	173
	P										140	506	151	192	40	52
	%										6.40	17.58	16.87	27.63	12.31	13.03
4. CIC	E										7381	20684	23462	26405	28960	51281
	P											N.A.	9416	10736	24527	30815
	%												33.55	30.91	62.68	99.93
5. CTE	E											328	437	553	669	842
	P												NA	NA	57	99
	%														5.76	8.50
6. CES	E												826	397	419	326
	P													NA	122	94
	%														9.98	13.54
7. CDM	E													607	153	258
	P														83	105
	%														13.67	15.51

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
8. CPFM	E													67	145	140
	P														8	14
	%														11.94	6.86
II. Diplomas																
9. DDE/ PGDDE	E	1104	1092	1140	1229	825	484	485	445	444	516	339	321	516	530	606
	P		217	204	160	270	141	102	94	86	82	28	101	139	69	86
	%		19.66	10.30	5.49	6.78	3.86	3.28	3.75	4.52	5.21	1.72	6.52	9.87	4.85	6.16
10. DCE	E		310	933	442	327	468	574	484	565	322	495	570	714	584	769
	P			4	5	39	48	46	52	39	69	59	12	35	37	18
	%			1.29	0.40	2.33	2.44	2.21	3.10	2.28	3.53	3.31	0.71	1.93	1.85	0.79
11. PGDFM	E					1179*	1593*	2823	2980	4835	8990	269	16422$	15777$	12007$	11169$
	P						136	208	353	650	827	1308	1305	1695	1715	1307
	%						11.54	7.89	6.72	9.51	8.58	8.53	10.91	7.35	5.82	3.68
12. PGDHRM	E					905*	1222*	2137	2329	3156	5438	279	16422$	15777$	12007$	11169$
	P						126	271	386	656	1069	553	1789	1838	1767	1338
	%						13.92	13.54	9.98	13.04	16.25	6.01	24.67	9.28	6.12	3.30
13. PGDMM	E					1657*	2238*	4950	5051	7283	11457	244	16422$	15777$	12007$	11169$
	P						163	222	430	908	1358	1919	1763	1866	2140	1794
	%						9.84	5.95	5.08	7.84	8.52	8.92	11.22	7.63	7.43	4.46
14. DCO	E					482	621	853	1099	1535	1507	7786	7721	4590	—	1706
	P						NA	153	227	295	453	477	364	1324	1709	
	%							13.87	12.59	11.03	13.20	11.87	3.40	7.67	9.28	18.39
15. PGDHE	E						862	938	396	506	494	329	379	561	421	523
	P							NA	16	38	30	48	70	48	61	62
	%								0.89	1.74	1.13	2.13	4.35	3.08	3.82	4.10
16. DRD/ PGDRD	E						2998	2370	1733	1525	1777	1436	1427	2343	2183	2827
	P							NA	64	122	178	214	246	306	375	416
	%								1.19	1.73	2.11	3.04	4.13	5.54	6.03	6.44

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
17. PGDOM	E							1978	2357	2481	4119	143	16422$	15777$	12007$	11169$
	P								34	331	573	672	712	598	767	806
	%								1.72	7.70	8.88	8.34	12.95	3.10	2.47	1.88
18. DCH	E							213	165	226	153	244	266	218	190	279
	P								NA	4	11	21	9	24	22	27
	%									1.06	1.83	2.83	1.20	2.83	2.66	3.13
19. DNHE	E								1227	998	977	963	984	1077	1079	1661
	P									NA	30	35	64	116	115	86
	%										1.35	1.10	1.56	2.92	3.04	2.26
20. DECE	E									189	348	359	500	738	626	1061
	P										NA	4	7	24	34	147
	%											0.74	0.78	1.73	1.78	6.82
21. DTS	E										1969	1299	923	1001	862 +	996
	P											NA	19	177	158	198
	%												0.58	4.24	3.16	5.31
22. PGDCA	E										2453++	NA	—	—	—	1284
	P											41	106	204	405	
	%											1.67	4.39	8.85	19.26	75.66
23. PGJMC	E										1257	1254	1040	1220	1031	1631
	P											NA	78	280	338	372
	%												3.11	8.06	7.66	9.92
24. PGDMCH	E												559	616	666	633
	P													NA	134	338
	%														11.40	19.80
25. PGDT	E													665	450	758
	P														NA	59
	%															5.29

III. Bachelor's

(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
26. BPP	E	9474	16920	13149	11217	7664	11872	9772	8881	7461	12657	10392	10793	10049	17456
	P				NA	NA	4224	NA	NA	4728	4302	3807	3614	2969	2698
	%				—	—	22.37	—	—	25.35	37.04	44.77	18.78	16.90	15.10
27. BA	E		9534**	11642**	10246**	10262	9889@	10440	9379	9816@	12922@	12813@	1304@	12638@	2403@
	P					NA	46**	303**	459**	701	1029	1174	1175	1158	1877
	%					—	0.11	0.59	0.74	0.99	1.29	1.43	1.43	1.38	12.21
28. BCom	E		2989**	3650**	3212**	3632	2274	3625	3342	4018@	4144@	4236@	3925@	3497@	5622@
	P					NA	13**	85**	129**	175	295	315	356	405	438
	%					—	0.10	0.54	0.67	0.78	1.12	1.15	1.29	1.46	1.60
29. BLIS	E				1872	1461	1473	1280	1246	1249	1222	1205	1578	2243	3613
	P					310	439	641	476	455	347	405	474	569	650
	%					16.56	14.52	15.80	10.14	11.65	9.36	10.80	12.66	14.02	10.40
30. BSc	E					1210	1465	1917	2100	2358	2045	2727	2348	2334	3970
	P								NA	4	40	67	137	202	234
	%									0.15	0.87	1.01	1.53	1.86	1.75
31. BTS	E									1280	1882	1515	1058	1954+	2559
	P												NA	20	73
	%													0.63	1.57
32. BScN	E									551	1086	407	512	495	502
	P												43	128	198
	%												7.80	8.03	10.57
33. BCA	E									2661	13577	14709	16633	18492	30906
	P												NA	2	105
	%													0.01	0.34

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
IV Master's																
34. MADE	E							188	49	51	47	20	52	36	38	51
	P								NA	75	43	14	22	66	30	24
	%									31.65	20.19	6.45	62.86	72.53	56.60	85.7
35. MLIS	E										746	693	477	453	605	902
	P											347	101	255	275	205
	%											46.51	9.25	17.37	16.51	11.05
36. MCA	E											2115	4435	8540	16678	22417
	P														45	166
	%														2.13	2.55
37. MP#	E	3424	5224	6530	6639	7617	7350	8368	10597	12812	17610	37899	16422	15777	12007	11169
i) DIM	P		NA	823	NA	2637	2147	1536	2229	2276	3173	3759	3307	5676	7759	6284
	%		—	9.52	—	14.74	11.83	9.13	11.34	10.09	11.63	10.57	5.39	8.75	12.70	20.42
ii) ADIM	P					330	900	602	911	1428	1501+++	2035+++	1509	582	377	251
	%					1.84	4.96	3.58	4.64	6.33	5.50	5.72	2.46	0.90	0.62	0.82
iii) PGDIM	P												214	2590	4666	4833
	%												0.35	3.99	7.63	15.71
iv) MBA	P						143	339	294	314	668	979	1321	1683	2328	3080
	%						0.49	0.93	0.66	0.57	0.99	1.16	1.09	1.23	1.55	1.92

Notes:

E = Enrolment in the relevant year.

P = Pass outs of the relevant programme as found in convocation reports.

% = Students pass rate or percentage calculated by applying the appropriate formulae for the respective years.

* Separate figures of enrolment for PGDFM, PGDHRM and PGDMM programmes were not available. SDM enrolment of 3741 and 5063 of the years 1991 and 1992 respectively have been proportionately divided to arrive at the figures of enrolment of PGDFM, PGDHRM and PGDMM programmes for 1991 and 1992. The proportion of enrolment for these programmes has been calculated by calculating their proportion to their total enrolment in each year from 1993-97. The average proportion of the enrolment so arrived at for PGDFM, PGDHRM and PGDMM were 31.52%, 24.19% and 44.29% respectively.

$ The direct admission to PGDFM, PGDHRM, PGDMM and PGDOM was stopped in 1997. From 1998 onwards the students admitted under MP could get any one fo the Diplomas or Specialised Diplomas or MBA under Management Programmes. So the enrolment figures of MP from 1998 to 2001 have been put as enrolment for the four SDMs as well. Thus, because of non-availability of the break-up figures of enrolment for these programmes the pass out rates for these years can be considered as less than what these could have been with exact break-up figures.

+   2 promotees from CTS are included in DTS. 91 promotees from DTS are included in BTS.

++   includes 248 promotees from DCO (to PGDCA).

**   Separate enrolment figures for BA and BCom for 1989, 1990 and 1991 were not available. During this period the enrolment for these programmes was done under BDP (includes BA and BCom). There were 12523, 15292 and 13458 students enrolled under BDP in 1989, 1990 and 1991. These students of BDP were proportionately divided under BA and Bcom based on the average proportions of enrolment (76.13% and 23.87% respectively for BA and BCom) by taking into consideration the specific enrolment of these programmes from 1992 to 2001. Similarly separate pass out figures for BA an B Com were not available. The pass outs of these programmes were shown under BDP. There were 59, 388 and 588 pass outs in 1993, 1994 and 1995. These pass outs were proportionately distributed under BA and BCom based on the average proportions of pass outs (78.08% and 21.92% respectively for BA and BCom) by taking into account the specific pass out figures available for thse programmes from 1996 to 2001.

@   Includes promotees from BPP to BA, BCom. The promotees to BA include 4224, 3649, 3558, 2915, 2890, 2145, 2021 in 1993, 1996, 1997, 1998, 1999, 2000 and 2001 respectively. Similarly, the promotees to BCom include 1079, 744, 892, 724, 824 and 677 in 1996, 1997, 1998, 1999, 2000 and 2001 respectively.

From 1987 to 1991 the admission was done under DIM only. Thereafter admission under MP started with a provision for course-wise registration.

+++   Included the pass outs of PGDIM as well. Separate figures of pass outs of ADIM were not available.

Conclusion

From the pass out rates of different academic years of various programmes shown in Table 3 the average pass out rate for each programme has also been calculated by dividing the sum of the percentages of different academic years of the programme by the number of batches of students which have completed minimum duration of the programme. The average pass rates or percentages of all the programmes so calculated are shown in Table 4.

Table 4: Average pass percentage of different academic programmes and their ranks

Rank within programmes of same level	Programme	Average Pass Percentage	Over all Rank (Rank across all programmes)
	Master's Programmes		
1	MADE	42.00	2
2	MLISc	20.14	4
3	MCA	2.34	30
4	MBA	1.06	35
	Bachelor's Programmes		
1	BPP	20.04	5
2	BLISc	12.59	8
3	BScN	8.80	15
4.5	BA	1.02	36.5
4.5	BSc	1.02	36.5
6	BCom	0.87	38
7	BTS	0.73	39
8	BCA	0.12	40
	Diplomas		
1	PGDCA	21.97	3
2	PGDHRM	11.61	9
3	PGDMCH	10.40	11
4	DCO	10.13	12
5	DIM	9.72	13
6	PGDFM	8.05	17
7	PGDMM	7.69	19
8	PGDIM	6.92	20
9	DDE/PGDDE	6.57	21
10	PGJMC	5.75	22

11	PGDOM	5.58	23
12	ADIM	3.40	25
13	DRD/PGDRD	3.36	26
14	DTS	2.66	27
15	PGDT	2.65	28
16	PGDHE	2.36	29
17	DCE	2.01	31
18	DECE	1.98	32
19	DCH	1.93	33
20	DNHE	1.75	34
	Certificates		
1	CIC	45.41	1
2	CTS	15.64	6
3	CDM	14.59	7
4	CIG	10.52	10
5	CPFM	9.40	14
6	CFN	8.41	16
7	CES	7.84	18
8	CTE	4.75	24
Grand Average Pass Rate (GAPR)		**8.85**	

From Table 4 it can be noticed that the highest pass rate or percentage is for CIC programme (45.41) while the lowest is for BCA (0.12) and the range of pass percentages (45.41-0.12) is 45.29. While there are only two programmes with their pass percentages above 40 (CIC and MADE) there are three programmes (BCA, BTS and BCom) with their pass percentages of less than one. Out of 40 pgorammes only 12 have the average pass percentage above 10, whereas 17 programmes have pass rate of less than 5 percent and the rest of the programmes have the pass rates between 5 and 10 per cent.

As far as the ranks of the progrmames, based on their average pass rates or percentages, are concerned CIC (45.41%) occupies the first rank among all the programmes taken together, followed by MADE (42%) with second rank. The last rank (40th) is occupied by BCA (0.12) followed by BTS (0.73) with 39th rank. As far as their ranks within the programmes of the same level are concerned MADE and MLISc occupy the 1st an 2nd ranks out of 4 Master's level programmes; PGDCA, PGDHRM, PGDMCH and DCO occupy 1-4 ranks among 20 Diploma level programmes; BPP and BLISc occupy 1st and 2nd ranks among 8 Bachelor level programmes; and CIC, CTS, CDM and CIG occupy 1-4 ranks respectively out of 8 certificate programmes.

To conclude, majority of the programmes (i.e. 17 of the 40 programmes) have the pass percentage of less than 5 and the grand average pass rate (GAPR) (i.e. the average of

the average pass rates of all programmes of all levels) is 8.85 only. In the case of 26 programmes, the average pass rate is less than the GAPR of 8.85 and only 14 programmes have it above GAPR.

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