

Development of Formulae for Studying the Students' Pass Rates of Programmes of Open Universities

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Background

A glance through various programmes of different Open Universities and other Distance and Open Learning Institutions reveal that the programmes are of different credits and levels leading to certificates, diplomas, degrees (bachelor/graduate, post-bachelor/postgraduate), M.Phil and Ph.D. Of course, there are a few non-credit and capsule programmes of very short duration of few weeks. The duration of credit programmes varied widely ranging from few months to few years. All these Universities and Institutions have prescribed duration for each programme keeping in view the minimum number of study hours required to be put up by their students for completion of the prescribed number of credit points. Accordingly, even a limit has been put on the maximum number of credits that a student can pursue in an academic year. This means, if the students work for required number of hours for the programme every day, they would be able to complete it within the specified duration. Otherwise (i.e. if they spend less time than required every day or week), they would be spreading the duration of study hours over few more years to complete the required credits. Keeping this in view, most of these Universities/Institutions have left it open for the students to work at their own pace to complete the required credits of a programme. But, Open University like Athabasca University, Canada insist upon completion of minimum number of credits of a particular programme in every academic year for maintaining the programme status of the students. Some Open Universities (e.g. Indira Gandhi National Open University and many State Open Universities in India, and Al-Quds Open University, Palestine) have prescribed limits on duration -- minimum and maximum duration -- of the programmes within which the students have to complete the respective programme. This means the registered students cannot obtain the respective certificate, diploma or degree before they complete the minimum duration and after completion of the maximum period from the date of their admission to the particular programme. After completion of the maximum period they seize

to be the students of that particular programme and are removed from the rolls of the programme. Of course there is no bar for them to register for the programme afresh.

Significance

In general, most of the credit programmes are of 6 months, 1 year, 2 years, 3 years or 4 years duration. As mentioned above, IGNOU and a few other Universities have prescribed both minimum and maximum durations for each programme. In the case of IGNOU these durations range from 6 months to 2 years for some programmes, from 1 to 3 or 4 years for some programmes, from 2 to 4, 5 or 6 years for some programmes and from 3 to 5, 6, 7, or 8 years for some other programmes. Here, it is important to note that calculation of pass rates for programmes which do not have any limit on (maximum) duration is easier than that for programmes with limit on maximum duration. This is so because, the students admitted to a programme (with limits on minimum and maximum durations), in different academic years will be completing the programme in different years. To put it more clearly, the students admitted to a programme in a particular year may pass it out in any year between the respective minimum and maximum durations and are thus spread over different years. Also, the pass outs of a particular programme of particular year include students from the batches of different years. Once the first batch of students of a programme completes minimum duration, the students of this batch start passing out from that year onwards. Thus, the pass outs of any particular batch are spread over different years between the minimum and maximum durations. Meanwhile the students from successive batches of that programme also complete the minimum duration and start passing out every year. As a result, the pass outs of a given programme in a given year include the pass outs from students of different batches, admitted in different academic years. It means, 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. 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 rates of students for different academic years of different programmes of IGNOU. Therefore, the author makes serious and scientific attempt not only to develop appropriate formulae for calculation of pass rates for different academic years of all IGNOU programmes but also to make these formulae, with appropriate changes, equally applicable to the calculation of students' pass rates for programmes of other Open Universities/Institutes as well.

Objectives

The major **objectives** of this paper are:

- i) to develop appropriate formulae for finding out the pass rates (percentages) of students for different academic years of different programmes of Open Universities; and
- ii) to illustrate the calculation of the students' pass rates for different academic years of all IGNOU programmes by applying different formulae specially developed under objective i) above.

The listing of all the programmes of all the Open Universities along with their durations is a difficult task and such an exercise is avoided here for want of space as well. Hence, the programmes of IGNOU are used and studied in this paper.

IGNOU Programmes

Let us look at Table 1 containing the credit programmes of IGNOU which are *currently on offer* along with their level, codes, year of offer/launch, and minimum and maximum durations.

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	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	2000	3	No bar
6	Master in Tourism Management	MTM	2000	2	4
7	Master of Arts in English	MEG	2001	2	6
II	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
III	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 Resources 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 Education	DPE	2001	2	6
IV	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	
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 Sahabhangi Vikas Yojana	CPP/ SAVINI	2001	6 months 2

Development of Formulae for Calculation of Students' Pass Rates

After perusing the above table one would agree that no one single formula would be equally applicable for calculation of the pass rates for different academic years of different programmes of IGNOU. Thus, there is need for development of different formulae so as to calculate students pass rates for different academic years of different programmes depending upon their minimum and maximum durations. Hence, appropriate formulae have been developed to suit to calculation of pass rates for different academic years of different programmes. *Here, it is very important to note that though the first batch students of some of the programmes have not yet completed the prescribed minimum and/or maximum durations 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 calculation of students' pass rates for programmes with 6 months minimum duration and 2 years maximum duration**

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 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 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 (See Table 2). 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 (PR_{y2} and PR_{y3}) 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.

$$PR_{y_2} = \frac{Py_2}{Ey_1} \times 100 \quad \dots\dots\dots (1)$$

$$PR_{y_3} = \frac{Py_3}{(Ey_1 + Ey_2) - Py_2} \times 100 \quad \dots\dots\dots (2)$$

Where

Py₂ = Pass outs shown under second academic year of the particular programme.

Py₃ = Pass outs shown under third academic year of the particular programme.

Ey₁ = Student enrolment of the first academic year of the programme.

Ey₂ = 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 have completed the

maximum duration of 2 years and are automatically removed from the rolls of the programme. Here, it is important to note that the students admitted in 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 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.

$$PRy_n = \frac{Py_n}{(Ey_{n-2} + Ey_{n-1}) - Py_{n-1}} \times 100 \quad \dots\dots\dots (3)$$

Where

Py_n = Pass outs shown under nth academic year of the programme.

Py_{n-1} = Pass outs shown under the academic year immediately preceding the nth year of the programme

Ey_{n-1} = Enrolment in the academic year immediately preceding the nth academic year, y_n , of the programme.

Ey_{n-2} = Enrolment in an academic year which precedes the nth academic year, y_n , 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, CIC, 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 have they not produced any pass out even after completion of minimum duration. It may also be noted that BPP has same minimum and maximum duration as of certificate programmes.*

ii) Formulae for calculation of students' pass rates for programmes with 1 year as minimum duration and 2 ½, 3 or 4 years as maximum duration

There are diploma, advanced diploma and post-graduate diploma programmes which have the minimum and maximum duration of one year and 2 ½ 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 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 ½ or 3 does not make any difference because the students who pass out after these 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 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 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 3rd academic year include the pass outs from the students enrolled in the 1st and 2nd academic years. Thus, the pass rate for the 2nd and 3rd academic years of any one of these diploma programmes also can 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 students 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 (PR_{y4}) of these programmes can be calculated as follows.

$$PR_{y_4} = \frac{Py_4}{(Ey_1 + Ey_2 + Ey_3) - (Py_2 + Py_3)} \times 100 \quad \dots\dots\dots (4)$$

Since the students enrolled in 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 ½, 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 corresponding 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 ½ or 3 years respectively can be calculated as follows.

$$PR_{y_n} = \frac{P_{y_n}}{(E_{y_{n-3}} + E_{y_{n-2}} + E_{y_{n-1}}) - (P_{y_{n-2}} + P_{y_{n-1}})} \times 100 \quad \dots\dots (5)$$

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

PR_{y_2} , PR_{y_3} , PR_{y_4} ,, and PR_{y_n} stand for the pass out rates (percentages) of the 2nd, 3rd, 4th, and nth academic years respectively of the particular programme .

E_{y_1} , E_{y_2} , E_{y_3} ,....., E_{y_n} stand for the enrolment in the 1st, 2nd, 3rd,,nth academic years respectively of a given programme.

$E_{y_{n-3}}$, $E_{y_{n-2}}$ and $E_{y_{n-1}}$ stand for the 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 these programmes (PR_{y5}) can be calculated by using the following formula.

$$PR_{y_5} = \frac{Py_5}{(Ey_1 + Ey_2 + Ey_3 + Ey_4) - (Py_2 + Py_3 + Py_4)} \times 100 \quad \dots\dots (6)$$

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 students 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.

$$PR_{y_n} = \frac{Py_n}{(Ey_{n-4} + Ey_{n-3} + Ey_{n-2} + Ey_{n-1}) - (Py_{n-3} + Py_{n-2} + Py_{n-1})} \times 100 \quad \dots\dots (7)$$

The above formulae (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 calculation of students' pass rates 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 year 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 students 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 passed out in the previous year(s). Thus, the students pass rates for the 4th, 5th and 6th academic years (PR_{y4}, PR_{y5} and PR_{y6}) 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.

$$PR_{y_4} = \frac{Py_4}{Ey_1} \times 100 \quad \dots\dots\dots(8)$$

$$PR_{y_5} = \frac{Py_5}{(Ey_1 + Ey_2) - Py_4} \times 100 \quad \dots\dots\dots(9)$$

$$PR_{y_6} = \frac{Py_6}{(Ey_1 + Ey_2 + Ey_3) - (Py_4 + Py_5)} \times 100 \quad \dots\dots\dots(10)$$

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 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 students 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.

$$PR_{y_n} = \frac{Py_n}{(Ey_{n-5} + Ey_{n-4} + Ey_{n-3}) - (Py_{n-2} + Py_{n-1})} \times 100 \quad \dots\dots\dots(11)$$

It may 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 years. 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 (PR_{y7}) of these programmes can be calculated by using the following formula.

$$PR_{y_7} = \frac{Py_7}{(Ey_1 + Ey_2 + Ey_3 + Ey_4) - (Py_4 + Py_5 + Py_6)} \times 100 \quad \dots\dots\dots(12)$$

But, the pass outs shown under 8th academic year of these programme do not include any pass out from the students 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.

$$PR_{y_n} = \frac{Py_n}{(Ey_{n-6} + Ey_{n-5} + Ey_{n-4} + Ey_{n-3}) - (Py_{n-3} + Py_{n-2} + Py_{n-1})} \times 100 \quad \dots\dots\dots(13)$$

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 (PR_{y8}) of these programmes can be calculated by using the following formula.

$$PR_{y_8} = \frac{Py_8}{(Ey_1+Ey_2+Ey_3+Ey_4+Ey_5) - (Py_4+Py_5+Py_6+Py_7)} \times 100 \quad \dots\dots(14)$$

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 calculated as follows.

$$PR_{y_n} = \frac{Py_n}{(Ey_{n-7}+Ey_{n-6}+Ey_{n-5}+Ey_{n-4}+Ey_{n-3}) - (Py_{n-4}+Py_{n-3}+Py_{n-2}+Py_{n-1})} \times 100 \quad \dots\dots(15)$$

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 (PR_{y9}) of these programmes can be calculated by using the following formula.

$$PR_{y_9} = \frac{Py_9}{(Ey_1+Ey_2+Ey_3+Ey_4+Ey_5+Ey_6) - (Py_4+Py_5+Py_6+Py_7+Py_8)} \times 100 \quad \dots\dots(16)$$

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 1st and 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.

$$PR_{y_n} = \frac{Py_n}{(Ey_{n-8}+Ey_{n-7}+Ey_{n-6}+Ey_{n-5}+Ey_{n-4}+Ey_{n-3}) - (Py_{n-5}+Py_{n-4}+Py_{n-3}+Py_{n-2}+Py_{n-1})} \times 100 \quad \dots(17)$$

iv) Special note on the management programmes

From 1987 to 1991 modular 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 admission started under Management Programme (MP) with a provision for course-wise registration. Also, from 1991 there has been direct admission (without entrance test) to Specialised Diploma Programmes, namely PGDFM, PGDHRM and PGDMM and from 1993 to PGDOM as well. This practice has, however, been 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.

As explained elsewhere, for DIM, ADIM, PGDIM, PGDFM, PGDHRM, PGDMM and PGDOM programmes the minimum and maximum durations are 1 year and 2 ½ 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, BSc, 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 up to the 9th academic year, which includes the pass outs from the students admitted in 1st to 6th 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 course the pass rate for any academic year, from 10th to nth, has been calculated by applying the following formula.

$$PR_{y_n} = \frac{P_{y_n}}{(E_{y_1} + \dots + E_{y_{n-3}}) - (P_{y_4} + \dots + P_{y_{n-1}})} \times 100 \quad \dots(18)$$

As mentioned earlier, the notations of E_{y_1}, \dots, E_{y_n} and $P_{y_1}, \dots, P_{y_{n-1}}, P_{y_n}$ in the above formula mean the same as in the case of all other formulae above.

But in the case of programmes with the duration of 1, 2, 3, 4, 5, 6, etc years but no limits on the minimum and maximum durations, the students admitted in all the previous years will remain the potential students who can pass the programme in any year. In this case there is a need to subtract only the pass outs of previous year(s) from the cumulative number of students on rolls minus those students who are yet to complete the duration of the programme till that year. So, the question of forming cohort of students of particular years does not arise because all the students admitted in all the previous years, except those who are yet to complete programme duration, together form the potential students on roll for generating the pass outs.

Thus, for calculating the pass out rate of students of any year of any programme with the duration of 1 year, the following formula can be applied.

$$PR_{y_n} = \frac{P_{y_n}}{(E_{y_1} + \dots + E_{y_{n-1}}) - (P_{y_2} + \dots + P_{y_{n-1}})} \times 100 \quad \dots(19)$$

Similarly, for calculating the pass out rate of students of any year of any programme with the duration of 2, 3, 4, 5, 6 years, the following formulae i. e. (20), (21), (22), (23) and (24) can respectively be applied.

$$PR_{y_n} = \frac{P_{y_n}}{(E_{y_1} + \dots + E_{y_{n-2}}) - (P_{y_3} + \dots + P_{y_{n-1}})} \times 100 \quad \dots(20)$$

$$PR_{y_n} = \frac{P_{y_n}}{(E_{y_1} + \dots + E_{y_{n-3}}) - (P_{y_4} + \dots + P_{y_{n-1}})} \times 100 \quad \dots(21)$$

$$PR_{Y_n} = \frac{P_{Y_n}}{(E_{Y_1} + \dots + E_{Y_{n-4}}) - (P_{Y_5} + \dots + P_{Y_{n-1}})} \times 100 \quad \dots(22)$$

$$PR_{Y_n} = \frac{P_{Y_n}}{(E_{Y_1} + \dots + E_{Y_{n-5}}) - (P_{Y_6} + \dots + P_{Y_{n-1}})} \times 100 \quad \dots(23)$$

$$PR_{Y_n} = \frac{P_{Y_n}}{(E_{Y_1} + \dots + E_{Y_{n-6}}) - (P_{Y_7} + \dots + P_{Y_{n-1}})} \times 100 \quad \dots(24)$$

And the formulae for programmes with any other duration can accordingly be developed with suitable changes as one can notice from the above formulae.

Out of the formulae developed above and keeping in view the minimum and maximum durations of different programmes, the relevant formulae, as mentioned above, have been applied for calculating the percentage of pass outs for different academic years of various programmes of IGNOU. The pass out rates, thus, obtained can be found in Table 2. The secondary data on year-wise enrolment and number of pass outs of each programme as available from the Vice-chancellors' 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 2. *It may be noted that the year under which the enrolment data starts against a programme in Table 2 is the first academic year or launch year of the programme. The first academic year is considered as the one in which the students have been admitted to a programme for the first time and the programme has also been offered to them for the first time.* 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. ***Here, it is very important to note that the programmes which have been launched recently and thus have not completed their minimum duration and the programmes which could not produce any pass out despite completion of minimum and even maximum durations by the respective batch(es) of students do not find a place in Table 3.***

Table 2: Students Enrollment, Pass outs and Percentage of Pass outs of different Academic Programmes of IGNOU: 1987-2001

S.No.	Programme	Academic Year														
		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)
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
		C			2548	4139	6527	11389	16653	15186	15078	11668	7958	5804	5302	2289
		%			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
		C								1882	1470	1301	990	730	786	931
		%								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
		C									2186	2879	895	695	325	399
		%									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
		C											28065	34730	39131	30838
		%											33.55	30.91	62.68	99.93
5.	CTE	E										328	437	553	669	842
		P											NA	NA	57	99
		C													990	1165
		%													5.76	8.50
6.	CES	E											826	397	419	326
		P												NA	122	94
		C													1223	694
		%													9.98	13.54
7.	CDM	E												607	153	258
		P													83	105
		C													607	677
		%													13.67	15.51
8.	CPFM	E												67	145	140
		P													8	14
		C													67	204
		%													11.94	6.86

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
II. Diplomas																
9.DDE/	E	1104	1092	1140	1229	825	484	485	445	444	516	339	321	516	530	606
PGDDE	P		217	204	160	270	141	102	94	86	82	28	101	139	69	86
	C		1104	1979	2916	3984	3652	3107	2510	1902	1575	1628	1548	1409	1424	1397
	%		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
	C			310	1239	1676	1966	2078	1678	1707	1954	1785	1699	1812	1995	2279
	%			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.DCO	E					482	621	853	1099	1535	1507	7786	7721	4590	-----	-----
	P						NA	153	227	295	453	477	364	1324	1709	1706
	C							1103	1803	2675	3433	4019	10702	17255	18409	9278
	%							13.87	12.59	11.03	13.20	11.87	3.40	7.67	9.28	18.39
12.PGD FM	E					1179*	1593*	2823	2980	4835	8990	269	16422\$	15777\$	12007\$	11169\$
	P						136	208	353	650	827	1308	1305	1695	1715	1307
	C						1179	2636	5251	6835	9635	15328	11959	23068	29468	35543
	%						11.54	7.89	6.72	9.51	8.58	8.53	10.91	7.35	5.82	3.68
13.PGD HRM	E					905*	1222*	2137	2329	3156	5438	279	16422\$	15777\$	12007\$	11169\$
	P						126	271	386	656	1069	553	1789	1838	1767	1338
	C						905	2001	3867	5031	6580	9198	7251	19797	28851	40601
	%						13.92	13.54	9.98	13.04	16.25	6.01	24.67	9.28	6.12	3.30
14.PGD MM	E					1657*	2238*	4950	5051	7283	11457	244	16422\$	15777\$	12007\$	11169\$
	P						163	222	430	908	1358	1919	1763	1866	2140	1794
	C						1657	3732	8460	11587	15946	21525	15707	24441	28814	40200
	%						9.84	5.95	5.08	7.84	8.52	8.92	11.22	7.63	7.43	4.46
15.PGD HE	E						862	938	396	506	494	329	379	561	421	523
	P							NA	16	38	30	48	70	48	61	62
	C							----	1800	2180	2648	2250	1609	1560	1597	1511
	%								0.89	1.74	1.13	2.13	4.35	3.08	3.82	4.10
16.DRD/	E						2998	2370	1733	1525	1777	1436	1427	2343	2183	2827
PGDRD	P							NA	64	122	178	214	246	306	375	416
	C							----	5368	7037	8440	7041	5957	5527	6217	6462
	%								1.19	1.73	2.11	3.04	4.13	5.54	6.03	6.44
17.PGD OM	E							1978	2357	2481	4119	143	16422\$	15777\$	12007\$	11169\$
	P								34	331	573	672	712	598	767	806
	C								1978	4301	6451	8053	5498	19300	31032	42481
	%								1.72	7.70	8.88	8.34	12.95	3.10	2.47	1.88

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
18.DCH	E							213	165	226	153	244	266	218	190	279
	P								NA	4	11	21	9	24	22	27
	C								----	378	600	742	752	848	827	863
	%									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
	C										2225	3172	4100	3973	3786	3808
	%										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
	C										----	537	892	1385	1910	2154
	%											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
	C											----	3268	4172	4996	3731
	%												0.58	4.24	3.16	5.31
22.PGJMC	E										1257	1254	1040	1220	1031	1631
	P											NA	78	280	338	372
	C												2511	3473	4413	3849
	%												3.11	8.06	7.66	9.92
23.PGDCA	E										2453++	NA	-----	-----	-----	-----
	P											41	106	204	405	1284
	C											2453	2412	2306	2102	1697
	%											1.67	4.39	8.85	19.26	75.66
24.PGDMCH	E												559	616	666	633
	P													NA	134	338
	C													----	1175	1707
	%													----	11.40	19.80
25.PGDT	E													665	450	758
	P														NA	59
	C														NA	1115
	%															5.29
III. Bachelor's																
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	
	C				----	----	18881	----	----	18653	11614	8504	19242	17571	17873	
	%				----	----	22.37	----	----	25.35	37.04	44.77	18.78	16.90	15.10	

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
27.BA	E			9534**	11642**	10246**	10262	9889@	10440	9379	9861@	12922@	12813@	1304@	12638@	2403@
	P						NA	46**	303**	459**	701	1029	1174	1175	1158	1877
	C						31422	41684	51527	61664	30245	39984	48334	57021	68768	80423
	%						-----	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
	C						9851	13483	15744	19284	22497	26340	27200	27471	27898	27301
	%						-----	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	1279	1222	1205	1578	2243	3613
	P						310	439	641	476	455	347	405	474	569	650
	C						1872	3023	4057	4696	3904	3706	3749	3745	4058	6248
	%						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
	C									----	2675	4588	6648	8939	10847	13372
	%										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
	C													----	3162	4657
	%														0.63	1.57
32.BScN	E										551	1086	407	512	495	502
	P													43	128	198
	C													551	1594	1873
	%													7.80	8.03	10.57
33.BCA	E										2661	13577	14709	16633	18492	30906
	P													NA	2	105
	C													----	16238	30945
	%														0.01	0.34
IV Master's																
34.MADE	E							188	49	51	47	20	52	36	38	51
	P								NA	75	43	14	22	66	30	24
	C								----	237	213	217	35	91	53	28
	%									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
	C											746	1092	1468	1666	1855
	%											46.51	9.25	17.37	16.51	11.05

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
36.MCA	E											2115	4435	8540	16678	22417
	P														45	166
	C														2115	6505
	%														2.13	2.55
37.MP#	E	3424	5224	6530	6639	7617	7350	8368	10597	12812	17610	37899	16422	15777	12007	11169
	C			8648	14355	17896	18149	16822	19652	22550	27272	35570	61389	64865	61115	30771
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	
	C					29434	36641	44670	54973	67471	84413	121333	136434	150528	160207	
	%					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.

C = Cohort of students of the relevant years who formed the base group for the pass outs of that year. C for DIM, ADIM, PGDIM and MBA remain the same

% = 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 the 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 of 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 and BCom 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 these programme 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

The above pass rates of different years of different programmes can be summed up by arriving at their average pass rates. From the pass out rates of different academic years of various programmes shown in Table 2, the average pass out rate for each programme has also been calculated by dividing the sum of the percentages of different academic years of each 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 3.

Table 3: 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 less than one. Out of 40 programmes 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 it between 5 and 10 percent.

As far as the ranks of the programmes, 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 and 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.

The average pass rate of all Master's level programmes taken together is 16.39 while the same for Bachelor's, Diploma and Certificate programmes is 5.65, 6.32 and 14.57 respectively. It means that the students of Master's and Certificate programmes are doing better than those of Bachelor's and Diploma programmes.

To conclude, majority of the programmes (43%) have the pass percentage 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. It means on the whole 91 percent of the students enrolled are going as wastage i.e. either as the drop outs or those who could not complete the programmes within the prescribed maximum durations. 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.

Similarly, in case of programmes of other Open Universities which have not put any limit on the (maximum) duration (in years), the average pass rate can be calculated by dividing the sum of the pass rates of different years of a programme by the number of batches of students which have completed the duration of that programme. Keeping in view the requirements for any further study, other statistical techniques can be applied on these average pass rates. If the interested researchers can take up longitudinal studies to find out the reasons for the above low pass out rates they would get very insightful results into the magnitude of dropouts and failures which together contributes to the problem of wastage in open and distance leaning institutions.

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