13. Measurement and Evaluation

The National Institute of Open Schooling (NIOS), erstwhile National Open School (NOS), came into being in 1989. In 1990 it was vested with the authority by the Government of India to examine and certify students up to pre-degree level. **The National Institute of Open Schooling conducted its first examination in 1991 and since then it has been conducting two examinations every year. It has conducted 31 examinations up to the year 2005-06. The National Institute of Open Schooling is the only Board which conducts two full-fledged examinations every year. One of the fascinating features of NIOS examinations is that it does not have the infrastructure of its own. It depends on institutions established by the public sector and private sector to conduct its examinations without disturbing their academic schedule. The National Institute of Open Schooling gives lot of flexibility in matters relating to admission and examination.**

The measurement and evaluation of learners' achievement in Open and Distance Learning System is mainly undertaken through external examination. Thus the techniques and tools of evaluation in Open Schooling have to be devised on systematic and scientific lines so as to make the scheme of external examination trustworthy and transparent for the learners. The process of learning in National Institute of Open Schooling commences when the learner seeks admission to any of its courses and continues till he/she appears in examinations (subject to eligibility) and is certified by the organisation. Examinations are integral part of evaluation. Examination is a technique to know what one has learnt, achieved and retained and how the learner expresses during the examination.

In order to provide reliability, validity and credibility to the National Institute of Open Schooling examination system, several in-built checks and balances have been incorporated into the system to ensure these objectives. The Academic Department of NIOS prepares design of question paper and a sample question paper based on the design and blue print. The paper setter is provided with the syllabus, study material, sample question paper and question paper design in order to help him/her to prepare a balanced question paper containing short answer type, very short answer type, essay type and objective questions based on knowledge, understanding and application.

NIOS organises workshops to improve the quality of question papers to ensure that these question papers are oriented to test not merely the acquisition of knowledge but also the ability to apply knowledge and development of

problem solving abilities. The question paper sets are moderated to ensure that the questions are within syllabus; they are neither too tough nor too easy and the marking scheme prepared is accurate and covers all parts of questions.

The evaluation process starts by holding meetings for standardisation of the Marking Schemes in varous subjects and their finalisation after the question papers have been administered. The Team Leaders and Evaluators evaluate the answer books at the Spot Evaluation Centres. The evaluation programmes are organised by the concerned NIOS Regional Centres; and the awards are sent to the Director (Evaluation). The results are processed and declared normally within four-five weeks of the close of the examination.

After the examinations are over, there is post analysis of question papers of all subjects covering mainly the standard of question papers, difficulty level and language.

The Moderation Committee reviews and moderates the results after having lively discussions. The result is approved by the Chairman of NIOS.

Public Examinations during 2005-06

As usual, the NIOS conducted two public examinations, one in April 2005 and other in October 2005. During the year 2005-06, 4,88,092 candidates appeared in the Academic and the Vocational Education Streams.

In all 2,53,431 candidates appeared for the Secondary Certificate Examination and 2,12,165 candidates appeared for the Senior Seconday Certificate Examination during 2005-06. In Vocational Examiantions, 22,496 candidates appeared during the year 2005-2006.

The April 2005 and October 2005 examinations were held in 1047 and 792 examination centres respectively spread all over the country. The total number of examination centres for the two Public Examinations was 1839. Detailed guidelines were issued to Centre Superintendents of the examination centres to take all precautions to ensure smooth and fair conduct of examinations at their respective examination centres. To ensure effective supervision of examination, two invigilaters are provided in each examination room.

To oversee the fair conduct of examinations, one full time Officer on Special Duty (OSD) was deputed at each examination centre. In addition, Flying Squad Teams were also sent to the examination centres. Assistance was sought from the State Education Agencies for ensuring smooth conduct of NIOS examinations. The Haryana School Education Board took suitable measures in this regard by deputing special teams of its officers to supervise and monitor the NIOS examinations in the State of Haryana.

In order to promote distance education in the country, the NIOS has introduced the use of several vernacular mediums for its Secondary course. The examinations in Urdu and in Regional Mediums viz., Telugu, Gujarati and Marathi were conducted during 2005-2006.

The Question Papers for all the subjects were printed during 2005-06 through the Confidential Press. These were stored and delivered from the Banks/ Treasuries/Police Stations. The question papers were printed in multiple forms (three types) and these were distributed in each examination room, so as to avoid one to one copying by the candidates.

The Answer Scripts were handled and processed, packets made and secret code allotted before their evaluation.

The Answer Scripts were got evaluated at the Regional Centres of NIOS at Allahabad, Chandigarh, Delhi, Guwahati, Hyderabad, Jaipur, Kochi, Kolkata, Patna and Pune through approved Evaluators and Team Leaders.

The Confidential Section of the Department of Evaluation processed the cases of unfair means (UFM) detected during the course of the two examinations. These cases were discussed in the meeting of a high level committee. The students were given opportunity to put their view-points before the committee. The students found guilty were imposed penalties and a few of them exonerated as per rules by the UFM Committee.

As a measure to promote open schooling in the country, NIOS also reached a memorandum of understanding with the newly established Rajasthan State Open School to conduct Secondary and Senior Secondary examinations for the candidates enrolled by them during the year 2005-06. Necessary guidance was provided to their functionaries for initiating the process of centre fixation etc., for public examinations in the State.

Certification

During the year 2005-2006, NIOS certified 73,471 and 60,683 candidates for the Secondary and the Senior Secondary certificate examinations respectively. In the vocational education subjects, the number of candidates certified during the year was 13,682. Yearwise details of the number of students appeared and certified since January, 1991 are given below :

Table 13.1 : Examination Profile

Exam	Secondary			Sr. Secondary			Vocational		
	App.	Cert.	%	App.	Cert.	%	App.	Cert.	%
Jan-91	21560	5050	23.42	13406	3730	27.82			
Jun-91	23076	5388	23.35	18116	5185	28.62			
Nov-91	15193	3622	23.84	10504	3055	29.08			
May-92	24507	6700	27.34	15191	4736	31.18			
Nov-92	13683	3328	24.32	8633	3716	43.04			
May-93	34035	9140	26.85	22275	6700	30.08			
Dec-93	18418	4431	24.06	13019	4942	37.96			
May-94	37860	12067	31.87	28054	10864	38.73			
Nov-94	18200	4899	26.92	14209	6196	43.61			
May-95	25393	4692	18.48	22383	5169	23.09			
Nov-95	28161	4895	17.38	22644	5893	26.02	821	518	63.09
May-96	50640	15082	29.78	34049	7900	23.20	866	312	36.03
Nov-96	31287	8141	26.02	21786	5258	24.13	980	550	56.12
May-97	63387	17889	28.22	39483	9138	23.14	1519	706	46.48
Nov-97	38640	9268	23.99	24283	5559	22.89	1708	942	55.15
May-98	76845	18204	23.69	48202	11538	23.94	2554	979	38.33
Nov-98	45326	9674	21.34	28955	6773	23.39	2343	1680	71.70
May-99	90380	25309	28.00	57761	13426	23.24	3631	1962	54.03
Nov-99	53320	16366	30.69	34806	9777	28.09	3510	1873	53.36
May-00	98948	31818	32.16	71453	13024	18.23	5654	3670	64.91
Nov-00	52039	13625	26.18	36842	8808	23.91	3154	2126	67.41
May-01	122101	33849	27.72	93175	17858	19.17	5206	2680	51.48
Nov-01	58880	15804	26.84	48403	12267	25.34	6250	3997	63.95
May-02	143782	48653	33.84	100942	23579	23.36	8766	5795	66.11
Nov-02	70263	20309	28.90	56100	14913	26.58	4969	3671	73.88
May-03	172533	99250	57.53	117872	39603	33.60	12293	8251	67.12
Nov-03	69896	23663	33.85	70385	20181	28.67	5466	3536	64.69
May-04	237300	77570	32.69	170052	36660	21.56	12730	7254	56.98
Nov-04	100680	26786	26.61	84474	17999	21.31	8622	5220	60.54
Apr-05	167169	46728	27.95	136560	36436	26.68	13073	8006	61.24
Oct-05	86262	26743	31.00	75605	24247	32.07	9423	5676	60.24
Total	**2089764**	**648943**	**31.05**	**1539622**	**395130**	**25.66**	**113538**	**69404**	**61.13**

Performance

Subject-wise pass percentage for the Secondary and Senior Secondary courses is given below:

**Table 13.2 Subjectwise Pass percentage in
Secondary Certificate Examination**

SUBJECT	APR 05		OCT. 05	
	APP.	PASS%	APP.	PASS%
201 HINDI	94198	82.03	13892	73.50
202 ENGLISH	115087	60.32	32041	54.19
203 BENGALI	551	69.87	155	46.45
204 MARATHI	1515	81.78	168	69.04
205 TELUGU	573	80.45	49	46.93
206 URDU	1036	79.82	199	78.39
207 GUJRATI	160	87.50	10	90.00
208 KANNAD	52	46.15	8	37.50
209 SANSKRIT	7650	44.47	2405	41.74
210 PUNJABI	4265	79.60	425	74.11
228 ASSAMESE	65	72.30	17	58.82
231 NEPALI	1253	58.26	485	40.00
232 MALAYALAM	359	93.03	12	91.66
211 MATHEMATICS	76922	42.59	28787	36.97
212 SCIENCE	96415	40.81	36239	39.09
213 SOCIAL SCIENCE	101732	53.43	32901	45.00
214 ECONOMICS	44049	65.39	11560	55.19
215 BUSINESS STUDIES	26463	60.84	7544	56.28
216 HOME SCIENCE	53764	64.37	11984	52.11
217 TYPEWRITING(HINDI)	224	62.05	66	56.06
218 TYPEWRITING (ENG.)	4109	65.19	1038	60.50
219 WORD PROCESSING	23282	84.63	2844	77.77
222 PSYCHOLOGY	3642	44.12	1276	30.48
223 INDIAN CUL. &HERI.	2220	54.68	691	49.34

SUBJECTWISE PASS PERCENTAGE IN SENIOR SECONDARY CERTIFICATE EXAMINATION

SUBJECT	APR 05		OCT. 05	
	APP.	PASS%	APP.	PASS%
301 HINDI	62488	69.46	15857	62.12
302 ENGLISH	84433	64.09	25875	50.65
306 URDU	747	65.06	202	78.71
311 MATHEMATICS	18606	46.00	6082	36.65
312 PHYSICS	21595	36.73	8454	42.71
313 CHEMISTRY	20956	39.78	7729	44.75
314 BIOLOGY	13983	48.94	4342	42.08
315 HISTORY	33855	69.46	9869	61.71
316 GEOGRAPHY	21092	52.67	7637	51.24
317 POLITICAL SC.	42927	62.49	14077	51.91
318 ECONOMICS	34942	55.62	12853	40.61
319 COMMERCE	16146	63.82	5047	58.89
320 ACCOUNTANCY	13228	43.43	4992	31.61
321 HOME SCIENCE	26853	64.41	7694	55.59
322 TYPE (HINDI)	182	60.99	51	62.75
323 TYPE (ENGLISH)	2264	58.17	839	47.32
324 STENO (HINDI)	19	47.37	4	50.00
325 STENO (ENGLISH)	120	36.67	31	64.52
326 SEC. PRACTICE	4942	67.08	1084	64.48
327 WORD PROCESSING	18771	62.63	4851	73.33
328 PSYCHOLOGY	4269	65.10	1527	57.89
330 COMPUTER SC.	4338	41.22	1492	56.57
331 SOCIOLOGY	13024	72.57	3511	61.46
332 PAINTING	1617	65.18	397	72.80

For the Secondary Education course, the pass percentage was above 40 in all subjects including Regional Languages for the April 2005 examinations. For the October 2005 examinations, the pass percentage was above 30 in all subjects. The lowest pass percentage in the Secondary Course in April, 2005 examination was in Science (40.81). In October, 2005 examinations, the lowest pass percentage was in Psychology (30.48). The highest pass percentage (above 90%) of marks obtained was in Malayalam in both the examinations in 2005, though the number of candidates appeared was small.

For the Senior Secondary April 2005 examinations, the pass percentage was above 60 in 13 out of 24 subjects. For the October 2005 examinations, the pass percentage was above 60 in 9 out of 24 subjects. The lowest pass percentage in the Senior Secondary examinations was in Steno (English) (36.67) for the April 2005 examinations. For October 2005 examinations, the lowest pass percentage was in Accountancy (31.61). The highest percentage of marks in April 2005 examinations was in Sociology (72.57) and in October, 2005 examinations, it was in Urdu (78.71).

**Regional Languages Medium (RLM) Examinations –
Secondary Examinations**

During 2005-06, examinations in RLM were conducted in Urdu, Telugu, Marathi and Gujarati. The maximum number of candidates appeared was in the Marathi medium.

Table 13.4
Examinations in Regional Language Mediums

1. Secondary

Medium	April 2005 Exam.			October 2005 Exam.		
	App.	Certified	Pass %	App.	Certified	Pass %
Marathi	1199	507	42	407	185	45
Telugu	583	295	51	204	22	11
Urdu	792	380	48	292	125	43
Gujarati	154	75	49	43	12	28

2. Sr. Secondary

Medium	April 2005 Exam.			October 2005 Exam.		
	Appe.	Certified	Pass %	Appe.	Certified	Pass %
Urdu	355	96	27	180	46	26

On Demand Examination System (ODES)

ODES at Secondary Level:

The introduction of On Demand Examination (ODE) at the Secondary Stage has provided complete flexibility to the learners to pursue learning at their own pace. This has made the system of examinations independent of the time frame and will help the learners to take up the examinations as per their wish and preparation. They can also appear for improvement of their performance any numbers of times within the period of their admission till they are satisfied with their achievement.

Under the scheme of On Demand Examinations, a learner can walk into the identified Testing Centre of NIOS on any day of his/her choice and appear for the examination in any subject. The learner is provided with a question paper generated by the computer based on a blue print/design specific to the subject. The blue print is a three dimensional grid, which allocates the number of questions and marks to each module/unit of the subject, the learning objective and the type of question. While generating a question paper, the computer picks up a question for each cell of the blue print from about 30-40 questions, which have been developed and computerised for each cell. Thus each student appearing in a subject gets a different question paper, even if a large number of students are appearing in that subject. The weightage of each question paper set is maintained in terms of content, objectives and the types of questions.

Launching of ODES at Secondary Level:

The On-Demand Examination System (ODES) at Secondary level recommenced with effect from 8 February, 2005 on prescribed days. The On Demand Examination was conducted thrice a week. The number of candidates appeared and passed in different subjects till March 2006 was as under :

Subjects	February, 2005 to March, 2006 (Cumulative)		
	App.	Pass	Pass%
Hindi	1028	680	66.15
English	1431	478	33.40
Sanskrit	105	39	37.14
Mathematics	1253	128	10.22
Science	1528	320	20.94
Social Science	1716	158	9.21
Economics	231	110	47.62
Business Studies	461	264	57.27
Home Science	696	454	65.23
Typewriting (Hindi)	7	4	57.14
Typewriting (English)	37	25	67.57
Word Processing	309	160	51.78
Total	**8802**	**2820**	**32.04**

The On-Demand Examination at Secondary Stage will be extended to the Testing Centres being established at the Regional Centres of NIOS.