#### Report of the Workshop on

# Creativity and Innovation in Designing and Development of Assessment Methods

(March 20-22, 2013)

Coordinator

Dr. Oum Prakash Sharma



National Centre for Innovations in Distance Education Indira Gandhi National Open University Maidan Garhi, New Delhi-110068 Report of the Workshop on

Creativity and Innovation in Designing and

Development of Assessment Methods
(March 20-22, 2013)

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#### Introduction

Evaluation is an integral part of the education system. But it has been notices that this very important component of the entire education system is most of the time not given due importance. The reasons may be many. But one of them is lack of proper training and orientation of the faculty and the experts involved in the evaluation system. Most of the faculty are not aware of the basic concepts of question framing and question paper design. In this context, a broad overview of the existing situation was undertaken. While analyzing the some of the question papers, following was observed:

- The question papers carrying 100 marks by and large have five to ten long answer type questions except for a few syllabus.
- The questions incorporated in the question papers mainly test memorized information and give scope for too much subjectivity in evaluation and marking.
- The wording of the questions could often admit different interpretation about the expected answer.
- In some of the question papers, questions are picked up from few blocks and units only without covering the entire syllabus.
- The questions are mainly of the short answer or the long answer type. In a few cases 'true and false' questions are also found.
- The questions carrying the same weightage often need widely varying answering time.

In view of the attributes of question papers, following could be the likely outcomes and impact on the quality and effectiveness of the evaluation system:

 The number of questions in most of the question papers are too few to effectively cover the syllabus. This can encourage selective study and endanger both validity and reliability of the question paper

- As what is tested is mainly attempted to be learnt, the absence of questions testing higher abilities (understanding application, analysis, synthesis, critical thinking, decision making, etc.) would ill prepare learners for facing the challenges of life in future. This would also endanger validity of the question papers
- The vague wording of questions and the indiscriminate use of directional words (discuss, elucidate, examine, etc.) are likely to result in varied interpretation about the scope and length of the expected answer and introduce subjectivity in scoring
- The options offer choice to examinees to choose different combinations of questions/ testing situations. This besides encouraging selective study is also likely to make scores incomparable and endanger reliability of the question paper
- Mismatch between the marks allotted to the questions and the expected answering time is likely to lead to imbalances.

In addition to the above, it is also observed that in most of the examinations, mainly the content part is tested whereas there should be a focus on testing the abilities rather than the content. Over emphasis of testing of content does not serve the purpose as the knowledge will change and it can be gained from various sources.

In view of the above mentioned observations, it was decided to organize a series of capacity building programme for the faculty of iGNOU. In this context, a first three day workshop, on 'Creativity and Innovation in Designing and Development of Assessment Methods' was organized by the NCIDE during 20-22<sup>nd</sup> March, 2013 at the Convention Centre, IGNOU, New Delhi.

#### **Objectives of the Workshop**

The basic objective of this workshop were

- to make the IGNOU faculty aware about the new trends in the field of assessment and evaluation,
- to impart training to the IGNOU faculty on framing good questions and balanced question papers, and

• to explore the possibility of innovation and creativity in framing quality questions and preparing balanced question papers.

#### **Design of the Workshop**

The Workshop was designed to lay greater emphasis on the activity aspect during different sessions. It was divided into 12 sessions over a period of three days which includes the inaugural and valedictory sessions. Besides highlighting the conceptual aspects of evaluation and assessment, each session had hands on practice by the participants under direct guidance of the resource persons. At the end of the workshop all the participants were required to preparing Question paper design, blueprint, sample questions and marking scheme for the courses of their choice.

#### Participants in the Workshop

The Workshop was attended by 21 faculty members from different Schools of IGNOU including SOS, SOJNMS, SOSS, SOET, SOA, SOH, SOHS, SOL, and SOVET. A list of the participants is enclosed at Annexure-A.

#### **Resource Persons**

Following were the resource persons during various sessions in the workshop:

- 1. Prof. H. S. Srivastava, former Dean, Evaluation & Mesearmnet Dept. NCERT, New Delhi
- 2. Prof. Pritam Singh, Evaluation & Mesearmnet Dept. NCERT, New Delhi
- 3. Prof. P. Tripathi, Registrar, Student Evaluation Division, IGNOU, New Delhi
- 4. Prof. N.K. Dash, School of Education, IGNOU
- 5. Dr. O. P. Sharma, Deputy Director, NCIDE & Coordinator of the Workshop.

## **Report of Day-1**

(20<sup>th</sup> March, 2013)

#### **Conceptual Framework of Evaluation and Examination**

The workshop begun on 20<sup>th</sup> March, 2013 with the *Welcome Address* and *Workshop Outline* by Dr. C.K. Ghosh, Director, NCIDE. He said that the evaluation is a very important component of the instructional system at IGNOU and hence we should be creative and innovative while preparing questions and question papers. He pointed out that this Workshop would enable the faculty to prepare good questions.

Then Prof. P. Tripathi, Registrar, SED gave a brief description of the *Evaluation System at IGNOU*. She highlighted the salient features of the Evaluation System and pointed out that there are number of challenges in smooth and fair conduct of the examination in time. In this regard she mentioned that the faculty and experts are too busy to provide question papers in time, some time mistakes creep in even after the moderation of question papers and said that many a times such mistakes are pointed out by the printers. Further she said that in most of the cases marking schemes are not provided by the question paper setters, in some case the quality of the question papers is also not satisfactory and sometimes the translation is horrible. In view of these observations, she said that this type of faculty orientation programmes focusing on the evaluation and assessment need be organized more frequently and in this context she appreciated the step taken up by the NCIDE to organized this Workshop.

Thereafter, Prof. H.S. Srivastava, a luminary in evaluation and assessment method, described the *Conceptual Framework of Evaluation and Examination*. He pointed out that in most of the examinations mainly the content part is tested whereas there should be a focus on testing the abilities rather than the content. He said that knowledge will change and it can be gained from various sources but emphasis should be on developing and testing the abilities and competencies. He advocated for a scientific method of evaluation. For this he said that the structure of questions need be changed and suggested that for framing quality questions we

should first identify the competencies and abilities and then a proper design and blueprint of question paper be developed before making a question paper.

In the second session, while highlighting the Critical Issues Related to the Evaluation System in IGNOU, Dr. O. P. Sharma said that for effective and fair assessment of the learning outcomes and performance of the distance learners, it is necessary to explore the possibilities of innovations and improvement in the existing system of evaluation in IGNOU. The creative aspect of a good question and overview of different forms of questions such as free response, fixed response, long answer, etc were also highlighted by Dr. O.P. Sharma and Prof. H.S. Srivastava.

Thereafter, Prof. Srivastava talked about the objectives of teaching and testing. He advocated for testing abilities and concepts rather than the contents. He was of the view that the as knowledge changes with time we should focus on developing the abilities. For this purpose he suggested to change the structure of the questions so as to assess the competencies and abilities. He suggested to follow the scientific method of evaluation.

The third session dealt with the two topics viz, *Creative Aspects of a Good Questions and Different Forms of Questions*. While talking about the creative aspects of a good question, Prof. Srivastava said that a good question must have three important aspects reliability, validity, and objectivity. He suggested that there should be a thought element in the questions and it should clearly specify the objective to be tested, difficulty level, and the language and wording of the question should be clear and unambiguous. The statements of questions must be stated clearly so that at single glance student understand what the examiner is interested in extracting. Moreover, he suggested that the words like 'elucidate', 'exemplify', 'criticize', 'relate', 'discuss', 'evaluate', 'weigh', 'examine', 'write a report on', 'what do you think of', 'what do you know about', should be avoided while framing questions.

Thereafter, Dr. O. P. Sharma gave an overview of different types of questions. He said that there are basically two types of questions- fixed response type questions and free response type questions. The fixed response type questions also called as objective type questions include multiple choice questions, true-false, matching, fill in the blanks, very short answer (one word or small sentence )type etc. while the free response type questions including essay type and short answer type questions require descriptive answer. Further he said that from

learning point of view as per the Bloom's Taxonomy the question can be of knowledge, understanding, application, synthesis, analysis, and evaluation type.

The last session of the day focused on how to frame different types of questions. In this regard Prof. Srivastava suggested to bring the creativity aspect while framing questions. He suggested that the question should be objective based, focus on specific ability, specify difficulty level, specify scope of the answer, and should have specific purpose. The wording of question should also be clear and specific and effort should be made to frame situational questions.

At the end of the first day, the participants were asked to frame different types of questions in order to bring improvement in framing of questions. They were given home work also to frame questions of different categories.

## Report of Day-2

#### (21st March, 2013

#### **Marking Scheme and Question Paper Setting**

In the first session of the second day of the workshop, Dr. Ghosh shared his personal experiences on the existing system of examinations in India including evaluation of practical. According to him even there exists variations in marks when a answer sheet is evaluated by the same examiner on different occasions. He suggested that such flaws in the evaluation system have to be checked.

Thereafter, the participants one by one, presented the questions framed by them. These questions were discussed in detail keeping in view of the features of a good question. The presentation of the questions framed by the participants continued in the second session also. Participants as well as the experts gave their suggestions to improve the questions. In this process participants learned from each other.

Thereafter, Prof. Srivastava gave a presentation on *Marking Schemes* and its significance in the evaluation system. Further he he talked about how to prepare marking scheme of questions, followed by the open discussion on the quality of marking scheme prepared. He stated that while framing a long answer type question maximum marks should not be more than 15( in absolutely ideal situation it should not be more than 10 marks) and this type of questions should not have more than 33% weightage. Furthermore the time slot allocated for each 1 mark question should be around 1½ min. He suggested to avoid fractional marks.

In the third session while describing the Innovative Features of a Quality Question Paper, Prof H. S. Srivastava first of all illustrated shortcomings in the designing and evaluation of question papers and then gave suitable solutions also. To mention a few of them, questions are prepared keeping in mind more emphasis on memorization rather than learning and understanding. He pointed out that in most of the cases question papers are prepared from selected portions only. He along with Dr. Sharma presented on how to prepare a balanced question paper. In this context they described in details the various steps in framing a balanced question paper such as question paper design, blueprint, marking scheme and

question analysis etc. Prof. Srivastava said that while designing a question paper we should keep the easy question in the beginning of the question paper. Weightages to various types of questions must be given based on the importance of topics, diagram if required have to be mentioned in the question itself (along with labeled/unlabeled) and there is no need to give choice in questions up to graduation level. In the word of Prof. Srivastava a question paper must be developed in such a way that it extracts, "how much a student knows rather than how much he doesn't"

Some participants inquired about framing of assignment questions. Prof. Srivastava said that the assignment questions should be different from term end examination as these questions have to be creative so that learners could explore something more and engage them in learning. He suggested that comparatively more number of question should be given in assignments so as to nurture learning habits among students.

At the end of the session some practice on developing question paper design and blueprint was carried out. Participants were given a home work also to develop marking scheme for the questions prepared by them.

## **Report of Day-3**

#### (22nd March, 2013)

#### Improving the Quality of Questions and Question Papers

The first session of the last day of the Workshop started with an open discussion on question paper design, blueprint and marking scheme. The questions, question paper design, blueprint and marking scheme etc presented by the participants were critically analysed. The participants gave very useful suggestions to improve the quality of questions and question papers. However, it was noticed that participants had difficulty in differentiating among application, understanding and knowledge based questions. In response to the queries of the participants regarding the length of answers for different types of questions, Prof. Srivastav suggested that the length of answers for questions of different types can be in terms of number of words as such: for Long answer type(300-350), Short answer type(50-100), Very short type(1 word / phrase).

In the afternoon session Prof. Srivastav illustrated importance of question wise analysis. For MCQs he remarked that no question should have choice such as; All of the above, none of the above, since these choices are biased against the others.

Referring to the qualities of a good question he said that a good question is the one which may test more than one abilities of student. Percentage of student solving a particular question correctly shows the difficulty of the question. Often it happens that a particular question is not being attempted by any of the student, the question concerned must be analysed and solutions should be explored, i.e. whether or not the question was out of syllabus? Whether students were not being taught well in that portion? While framing MCQs one should be very rational in assigning answers to choice such as (a), (b), (c), (d) In most of the cases it happens that people allot either (a) or (c) to correct answer. Some restrictions have to be imposed to overcome this tendency.

Prof. Srivastav made a very clear differentiation between design and blueprint of a question paper. He said that whereas design is fixed entity and blueprint vary from years to years but the design remains in operation for two to three years. Using a single design number of

blueprint can be made and from a single blueprint number of question papers can be generated. While commenting upon knowledge and application types of questions, he elaborated that a question is of understanding type when two or more knowledge type questions are linked together. An application question is that which covers both the knowledge and understanding type questions.

Throughout the Workshop rigorous analysis and discussion of questions to be framed for examination as well as assignments was made and the results show a number of flaws in the existing methods of question preparation, marking schemes and evaluation of answer scripts. Finally it was concluded that some checks and balances have to be applied in question framing and assessment methods in order to make the current system of examination more effective.

In the concluding session, Dr. C. K. Ghosh, Director, NCIDE hoped that the deliberations during the three days would bring change in the quality of questions and the participants would be able to develop better question papers in a scientific manner. Thereafter, he along with Prof. Srivastava and the faculty of NCIDE distributed certificates to the participants.

### Feedback Report

In order to assess the effectiveness of the Workshop on ''Creativity and Innovation in Designing and Development of Assessment Methods'' organised by the NCIDE during  $20^{th}$  –  $22^{nd}$  March, 2013, a feedback was taken from the participants by circulating a feedback form at the end of the Workshop. A copy of the feedback form is enclosed at Annexure- 1

Out of the total 21 participants who attended the workshop, the feedback form was received from the 18 of them. The participants of the workshop included Associate Professors, Readers and Assistant Professors from different schools of the University. The first question of the feedback form had 13 statements related to the workshop and the views of the participants were sought on 4 point scale indicating 1 for strongly disagreeing and 2 for strongly agreeing with the statements. Besides it, some other questions were also asked about the workshop. Lastly they were requested to give their suggestions also, if any.

On analysing the feedbacks received from the participants, following aspects have emerged out:

- 1. All the participants were of the view that the workshop was well paced and had adequate breaks during the delivery of lectures and it provided sufficient scope for interactivity with the resource persons as well as with the fellow participants.
- 2. Regarding the facilitators and resource persons, all the participants have agreed that they were knowledgeable and well prepared, and they were responsive to the questions, as well as observations of the participants.
- 3. Almost all the participants have agreed that their knowledge and understanding about the methods of evaluation have been enhanced as a result of the workshop. While responding to the question about their pre-workshop knowledge related to the assessment and evaluation, many of the participants have expressed that they did not have adequate knowledge about the evaluation.

- 4. Most of the participants said that the topics and content covered at the workshop were intellectually stimulating and useful. Technical sessions and presentations were quiet informative, the overall standard of presentation was quiet impressive, and the documents provided at the workshop were useful and relevant.
- 5. Most of the participants expressed that they will incorporate the knowledge gained in designing of questions and question papers and evaluation of answer scripts.
- 6. While responding to the questions related to the participants, most useful aspects of the workshop, most of the participants have attributed to the session on Design and blueprint of question paper. However, some of them have said that the sessions on assessment and evaluation, and Question framing activities were the most useful.
- 7. Likewise when the participants were asked about the least useful aspects of the workshop, replies were different. Most of them voiced that workshop was overall extraordinary, except few who complained about the venue and time allotted for the workshop.
- 8. In the same way they articulated that though the open discussion was excellent, yet the workshop lacked group activities.
- 9. Moreover, leaving few, all of them admired various activities and desired to recommend the Workshop to other colleagues. Some of them expressed willingness for more open discussion, more handouts and desired more workshops for continuous improvement in future.

### **Suggestions for Future**

During the workshop, a number of suggestions came from the participants so as to srenghten the examination and evaluation system in the university. In this context, the following suggestions have been given by the participants.

- 1. **Training for All faculty Members**: All the faculty including the staff of SED and related divisions need to be trained about the evaluation methodology through this kind of workshops.
- 2. **Oversee Question paper Formulation:** If possible, some experts from NCIDE must be assigned the task to oversee the question paper formulation after every six month.
- 3. **Online Workshops for Training:** Facilities of online workshop should be explored to continue interaction with the participants of the workshop.
- 4. **Question Paper Analysis:** There should be discussion on original question papers, and their analysis need to be done on regular basis.
- 5. **Develop Resource Material:** Some more handouts and resource material related to the evaluation be made available to the participants.

The three-day Workshop on "Creativity and Innovation in Design and Development of Assessment Methods" was completed successfully.

Dr. O. P. Sharma, Coordinator of the workshop expressed gratitude to all.

#### Annexure-1 Proforma for

<b>Feedback on Evaluation</b>	System:	in IGNOU
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	S.No.	Academic	Administrative				
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Sr. No.	Name of the Participant	School	Designation
1.	Dr. Shikha Rai	SOJNMS	Assistant Professor
2.	Ms. Jyoti Sharma	SOFL	Assistant Professor
3.	Anuj Kumar Purwar	SOET	Assistant Professor
4.	Dr. Shashank Srivastava	SOET	Associate Professor
5.	Ms. Shwetha Tripathi	SOET	Lecturer
6.	Ms. Asha Yadav	SOVET	Assistant Professor
7.	Dr. Neerja Sood	SOHS	Assistant Professor
8.	Dr. Manish Trivedi	SOS	Reader
9.	Mr. N. Venkateshwarlu	SOET	Associate Professor
10.	Dr. Jyoti Chawla	SOTST	Assistant Professor
11.	Dr. Gaurav Singh	SOE	Assistant Professor
12.	Dr. Suhas Shetgovekar	SOSS	Reader
13.	Dr. Maneesha Pandey	SOS	Assistant Professor
14.	Dr. Satya Raj	SOS	Assistant Professor
15.	Shivaji Bhaskar	SOFL	Assistant Professor
16.	Anand Gupta	SOL	Assistant Professor
17.	Dr. M. Prashanth	SOS	Asst Professor in Geology
18.	Urshla Kant	SOVET	Assistant Professor
19.	Dr. Neha Garg	SOS	Assistant Professor
20.	Dr Sanjay Agrawal	SOET	Reader, EE
21.	Dr. Rachna Agarwal	SOVET	Assistant Professor
22.	Dr. Geetika S. Johri	SOVET	Assistant Professor
23.	Dr. Mohd. Abdul Kareem	SOS	Assistant Professor
24.	Dr. K. Nageswara Rao	SOS	Assistant Professor
25.	Dr. Nayan Tara Padhi	CCETC	Assistant Professor
26.	Dr. Kakoli Gogoi	SOS	Assistant Professor

## Annexure-3 **Programme Schedule**

## Workshop on Creativity in Designing and Developing Assessment Methods NCIDE, IGNOU

Venue: IGNOU Campus HQ, New Delhi, **Date:** 20-22 March, 2013

Day & Dat e	Session (10030 – 11.30hrs)		Session (11.45 -13.15hrs)		Session (14.00-15.45hrs)		Session (16.00-1700hrs)
Day 1	Inaugural Session;  • Welcome & self Introduction  • Prog. Introduction  • Dr. O.P. Sharma  • Conceptual framework of Evaluation & Examination  -Prof H.S. Srivastava  • Evaluation in IGNOU  - Prof. P. Tripathi	Tea Bre ak (11. 30 – 11.4 5hr s)	Learning Objectives and Evaluation – Prof. H. S. Srivastava  Developing competence based learning objectives – Hands on practice by the participants	Lunc h Brea k (13.1 5- 14.00 hrs)	Developing competency based learning objectives - Hands on practice by the participants  Characteristics of a good question - Prof. Pritam Singh	Tea Brea k (15.4 5- 16.00 hrs)	Different forms of questions – An Overview Prof. H.S. Srivastava
Day 2	Presentation on Framing LA/SA & VSA type questions Prof. H.S. Srivastava  Preparing LA/SA/VSA type of questions - Hands on practice by the participants		Open discussion on the quality of questions prepared		Presentation on Framing Objective type questions Prof. Pritam Singh  Preparing LA/SA/VSA type of questions  - Hands on practice by the participants		Open discussion on the quality of questions prepared
Day 3	Characteristics of a quality Question Paper – Prof. H.S. Srivastava		Preparation of a question paper — different steps (Preparing QP design & blueprint, questions, marking scheme & question analysis) — Prof. Pritam Singh		Preparing Question paper design, blueprint, sample questions and marking scheme Hands on practice by the participants Importance of Question wise Analysis — Prof. N.K. Dash		Open Discussion on Question paper design, blueprint, sample questions and marking scheme Home Assignment Valedictory Session