

SETTING STANDARDS AND INNOVATIONS - A ROAD MAP OF SBVU EXAMINATION SYSTEM V N Mahalakshmi *

As a part of the quality initiatives involving Teaching- Learning-Evaluation systems, the Exam division of Sri Balaji Vidyapeeth University, under the able guidance of our honorable Vice-Chancellor, Prof. K.R. Sethuraman, an educationalist par excellence, has taken initiatives to benchmark standards and innovations in the evaluation process.

FACT FILE

The Sri Balaji Vidyapeeth University exam wing currently evaluates 15,000 student-evaluations per year. The Under Graduate exams carry single valuation and the Post Graduate exams carry double valuation in all the disciplines (medical, dental and nursing streams).

The process of standardization started with an analysis of the strengths and weaknesses of the existing system and search for technically and logistically viable options. The analysis identified the following defects in the system.

The major rate – limiting steps in the traditional exam process include the manual double stamping of dummy numbers in the answer books and the process of decoding of dummy numbers. This requires manual verification of all dummy numbers allotted to a particular student, against his/ her register number [For eg. : if a student writes 6 papers – each with 2 sections, the total no. of dummy numbers allotted to the is = $2 \times 6 = 12$ sets]. This process is a potential source of human errors.

The other potential sources of pitfall is involved in the exam process include,

1. Printing & sending the Question papers to other constituent colleges of the University prior to the day of exams. This could result in

- Potential leak of papers
- non – availability of question papers at the start of exams due to natural calamities accidents, etc.,

2. Manual entry of marks in the system is also prone to human errors, although we have put in checks mechanisms at this level by verifying the marks entered against the mark list.

3. Analysis of group performance on a single item basis is also difficult, as it involves manual entry of marks for individual questions for all subjects and candidates, which would involve handling the huge amount of data. This step is again prone for errors in transcription.

Innovations in the exam process

Once the analysis of the strengths and weaknesses of the existing system was complete, the following innovations/standardizations are introduced in the exam process.

1. **EXAM SCHEDULES** are drawn at the beginning of academic year and circulated in the academic calendar.

2. **The Students' Information System** is updated on regular basis. SIS Garuda, an in-house developed program, also helps student to fill in their exam application on-line. The exam division of the University uses this information for generating personalized exam schedules for students and to print the Examinee identity cards. A 10 digits Unique Identity Number is generated and assigned to all students, across all disciplines for the identification purposes.

3. **Eliminating Ambiguity in questions** - As a part of the quality initiatives, the SBVU exam division is set about eliminating ambiguity in questions. The question papers pattern is changed to include very short objective questions, focused short answers and structured essay questions. SBVU-AHEAD, the Academy Of Health Education And Development, organized and conducted workshops on “Question paper setting and validation” to all faculty of the constituent colleges. As a follow-up of this work shop, all the Departments prepared the blue print guidelines of

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question papers based on the specific learning objectives (SLO) in mind. This is used as a template for the question paper setters.

- The paper setters are given elaborate blue print guidelines specific to the learning objectives of the subject being evaluated and also weight-age for various systems. They are asked to fill in an item card analyzing the distribution of questions and marks across systems, level of difficulty and type of knowledge being tested – recall, understanding or application. They are also asked to submit a relevant answer key covering the key points to be discussed in the answer. The paper setters are asked to frame specific and relevant questions, without ambiguity.

4. **Vetting of the question papers** -The question paper received from the examiners are subjected to a 3 stages vetting process involving,

- Matching against the blue print guidelines &
- Looking for grammatical errors, errors in the framing of questions and repetition – to be done by COE's office. And also
- Checking for relevance and validity by the concerned subject expert.
- All question papers are subject to scrutiny and approval by the Vice- Chancellor, for their global relevance and applicability to the student population being tested.

A checklist encompassing these details is evolved and is being filled by the exam division. A standard template with unique, non reproducible fonts is used for printing the question papers.

5. **Examiners database**- Extensive database of eligible external examiners has been collected from MCI recognized Institutions in the state and neighboring states.

6. **The actual conduct of exams**

- **Secure online transmission and printing of question papers** to off campus institutions in secure, encrypted form ½ an hour before the start of exams.
- **Guidelines of conducting theory exams**- An exam hand book, covering all the rules and regulations of exams, standard operating guidelines to be followed in specific situations, exam day checklist etc., has been developed and introduced into practice.

7. **Redesign of Answer Booklets** - To expedite the exam process, OMR coding of answer books is introduced to code student and exam information. Each booklet has an unique barcode to tag examinee information and valuation. The new answer booklets are also aesthetically re-designed with inclusion of safety features like University logo watermark, index tab for tracking question numbers, safety stitching and tamper proof stickers.

8. The answer booklets are subjected to **central evaluation**. To eliminate 'examiner bias', each examiner is asked to correct the same question in all the answer booklets.

9. **Blinding** of the answer papers is by the process of aligning a preprinted bar code on the answer sheet to the examinee information. The marks are also entered in OMR sheets having the barcode. The practical examinations are conducted by the external and internal examiners and marks are entered in a barcoded, OMR sheet. Then all the OMR sheets containing student information, evaluated theory marks and practical marks are scanned and the output emerges as excel file to be tabulated by the software for analysis of the results.

10. **Evaluation of the group performance** includes plotting of the marks scored by all the students in the group to total marks awarded for each question. This process can identify the potential faults in the evaluation tool i.e., the question themselves or the evaluation process (examiners). This also helps in the need for moderation of the group score if there are flaws in the system / tools.

- Though this system has been used extensively in many Universities & Colleges across India, our evaluation is unique, that it allows analysis of marks awarded to individual questions. This robust system was conceived and developed by the Exam division in collaboration with the Department of Information Technology to suit our local needs.

- The process is structured with an error rate of six sigma.

11. After analysis, board meeting is conducted and results are declared online and a SMS information is sent to the candidates.

The Advantages of the new system

- **Quality control in the process** - reduction of errors to 'zero' i.e. Zero tolerance of human errors such as data entry errors, wrong assignment of marks, etc., Performance of this system has an error rate of less than six sigma.
- **Efficiency:** Speeding up the entire process so that the time lag between the end of the exams and declaration of results is reduced to less than 48 hours. It also improves human efficiency and reduces the need for human intervention. This helps us to
 - o Resume classes / course early
 - o Helps in our resolve towards a greener, paperless office.
- Most importantly, this system satisfies the NAAC & UGC requirements.
- This would also help us in the wake of increases intake of students and enable the University grand design to start a no. of new courses.
- Introduction of these reforms in examination system has resulted in a positive feedback from students and examiners.

An Analysis of the revised exam pattern:

Strength

- Improves Quality;
- minimises error;
- Decrease turn – around time
- Positive feedback from students and examiners

Weakness

Requires

- Special equipment
- Software
- Skilled personnel
- Training

Opportunity

- Automation of the process
- Economically viable

Challenges

- Short time frame available before December 2013 exams has been overcome by expediting matters

Plan ahead

1. Having restructured the theory exams and systemized the exam process, we are now set out to objectivise the practical/clinical/oral exams. This is by introducing OSCE/ OSPE and structured viva in the exams. A series of workshops **on Objectivising the clinical / practical / Oral exams** on OSCE /OSPE for faculty of all constituent colleges is planned for in Feb – Mar 2014.