Notable Quotable

"All truth passes through three stages.

First, it is ridiculed.

Second, it is violently opposed.

Third, it is accepted as being self-evident."

-Arthur Schopenhauer

Standardized *Viva Voce* as an Effective Tool for Assessment for Nursing Students

Introduction

Evaluation or assessment is a vital component of any educational programme. In nursing programmes practical examination is followed by *viva voce* as an assessment tool to assess the components, which are not covered or assessed during theory/practical examination, and also to assess the analytical, critical thinking of the students. It is an interaction between the student and one or more examiners. In traditional *viva voce* the examiner asks questions to which the student replies. This helps the examiner to assess the knowledge of the student and the ability to express. Students also get a chance to express themselves in depth, gain confidence through interaction with the examiner and get feedback.

On the other hand conducting *viva voce* in conventional system has its own disadvantages such as fear, anxiety, thought block and nervousness of the student. The environment is threatening and the examiner could be biased. The questions asked vary from student to student and may not cover syllabus. The examiner may reword same question differently, ask easy/difficult questions. Many a times analytic and problem solving abilities are not assessed by the examiner. The examiner may get tired. Various other related factors are associated for the short comings of a *viva voce*. Guliford in 1954, emphasized that oral examinations are prone to many errors like halo effect (a judgment of one attitude influences judgments of others); judgment cluster in the middle; a general tendency of leniency; judgment of students are influenced by experience of preceding students.

Assessment has an impact on learning of students and therefore it is necessary to:
1. use effective assessment tools to provide feedback to students and to improve learning.
2. assess the depth of knowledge rather than recall facts which a student can memorize.
3. nursing students need to use their theoretical knowledge to take certain critical decisions for patients care, in administration and day to day functioning at various levels.

The structured *viva voce* developed by the author overcomes many deficiencies of conventional *viva voce* and it is a new concept in assessment of students in nursing education. It can assess or evaluate the knowledge and performance of students in any subject. It is a modified form of Objective Structured Clinical Examination or Objective Structured Practical Examination. This can be done by deciding the syllabus to be covered and competencies to be assessed. It is important to make a blue print/checklist of questions to be asked. The examiner will note the question, answer and score each student, and also give feedback.

Structured *viva voce* is used in medical education but in nursing it is a new method of assessment with very few studies available. Therefore, the study was undertaken in the Programme Study Centers of IGNOU for Post Basic B.Sc. Nursing at Delhi. The Aim of the study was to introduce new methods of assessment for the 3rd year Post Basic B.Sc. Nursing students.

Objectives

The objectives were to:

1. Modify *viva voce* as an assessment tool.
2. Design a student friendly and effective tool.
3. Have uniformity in assessment by the examiner.
4. Remove the bias of the examiner.

Methodology

Traditional Viva Voce

The third year Post Basic B.Sc. Nursing students (*n*=120) were assessed by traditional *viva voce* in 2009, 2010, 2011, in one Programme Study Center in Delhi for the Nursing Education and Research course. Feedback was taken from faculty and students. The following observations were made:

Traditionally in Post Basic B.Sc. practical examination the traditional *viva voce* is used for assessment by the examiners. It was observed that students were anxious, nervous, had thought block, not able to recall, not able to understand the question, frightened to ask the question again, carry over effect and the environment had an impact on the student. It was also observed that the examiner was not consistent in asking questions. There was an influence of internal examiner. Other factors were: the examiner was tired at the end of the day and got irritated; biased effect of the face value of the student on the examiner etc.

Key Elements of the traditional system of viva voce:

- No question bank was available.

- *Viva voce* was conducted after practical examination.

- Examiners were asking questions to different students in different ways.

- Easy and difficult questions were asked by the examiners.

- Number of questions varied.

- No criterion was developed to give marks.

- Few seconds or ½-1 minute was given to the student to think and answer the question.

- In case a student was not able to answer a particular question then the student was asked a different question   or same question was asked in a different way or examiner scolded the student.

- Negative remarks by the examiner with no feedback.

- Total marks allotted for *viva voce* varied from 15 to 25 out of a total 50 marks of the practical examination.

To overcome the above difficulties it was decided to review literature regarding structured *viva voce* and conduct a pilot structured *viva voce* .

Pilot structured viva voce

A pilot structured *viva voce* was conducted in one regular College of Nursing for the Community Health Nursing course. The faculty and the students gave favourable acceptance to the new method of *viva voce*. They felt was better than traditional *viva voce* method. A uniform pattern was followed and the environment was non-threatening. The coverage of syllabus was better and the student was satisfied.

Therefore it was decided to use structured *viva voce* for 3rd year Post Basic B. Sc. Nursing students of IGNOU.

Implementation of the Structured Viva Voce

The students were briefed about the method of standardized *viva voce* and the internal faculty permission was also sought.

The third year Post Basic B.Sc. Nursing students (*n*=120) were assessed by structured *viva voce* in 2012, 2013, 2014 in another one Programme Study Centre of IGNOU in Delhi for the Nursing Education and Research course. Theory course blocks were reviewed and question bank was developed along with the marking scheme and model answers. Two sets of questions were

developed, i.e. easy and difficult sets. Questions were written on slips and folded carefully. During the *viva voce* the students were again briefed about the method.

Students were told to pick up the slips from the easy and the difficult box and answer the question. In case a student was not able to answer (easy / difficult question), opportunity was given to pick up a new slip and answer the question. In case the student was not able to answer 4 to 5 questions, he / she was told to read the blocks again and come at the end of the practical examination and the same procedure was repeated.

Outcome of the Structured *Viva Voce*

It was observed that students were anxious or nervous in the beginning but gained confidence later. They had the opportunity to read the question again and understand it, had enough time to think and answer the question. The environment was student friendly. They had opportunity to change the question if not able to answer particular question, this gave them confidence to answer and face *viva voce*. The carry over impact was less. The students who came later were more confident and relaxed. The examiner was also relaxed and there was no influence of the internal examiner. The examiner was able to give feedback to students. The students appreciated the method, felt that it was fair and student friendly.

Key Elements of the structured viva voce method

- The question bank was available covering all the units.
- The *viva voce* was conducted after the practical examination.
- Questions were written on slips and students selected slips randomly and answered the question.
- Easy and difficult question slips were kept separately.
- The total number of questions asked from students was uniform; i.e., easy and difficult questions were asked from each student.
- Easy questions were given 1 or 2 marks and difficult questions were given 4 or 5 marks.
- 1-2 minutes time was given to student to read and think and then answer the question.
- In case a student was not able to answer a particular question the student was asked to pick up another slip and answer the question.
- Feedback was given to student.
- Total marks for *viva voce* were 20 out of a total 50 marks practical examination.

The observations of the students and the faculty members on the traditional *viva voce* and structured *viva voce* are presented in Figure 1.
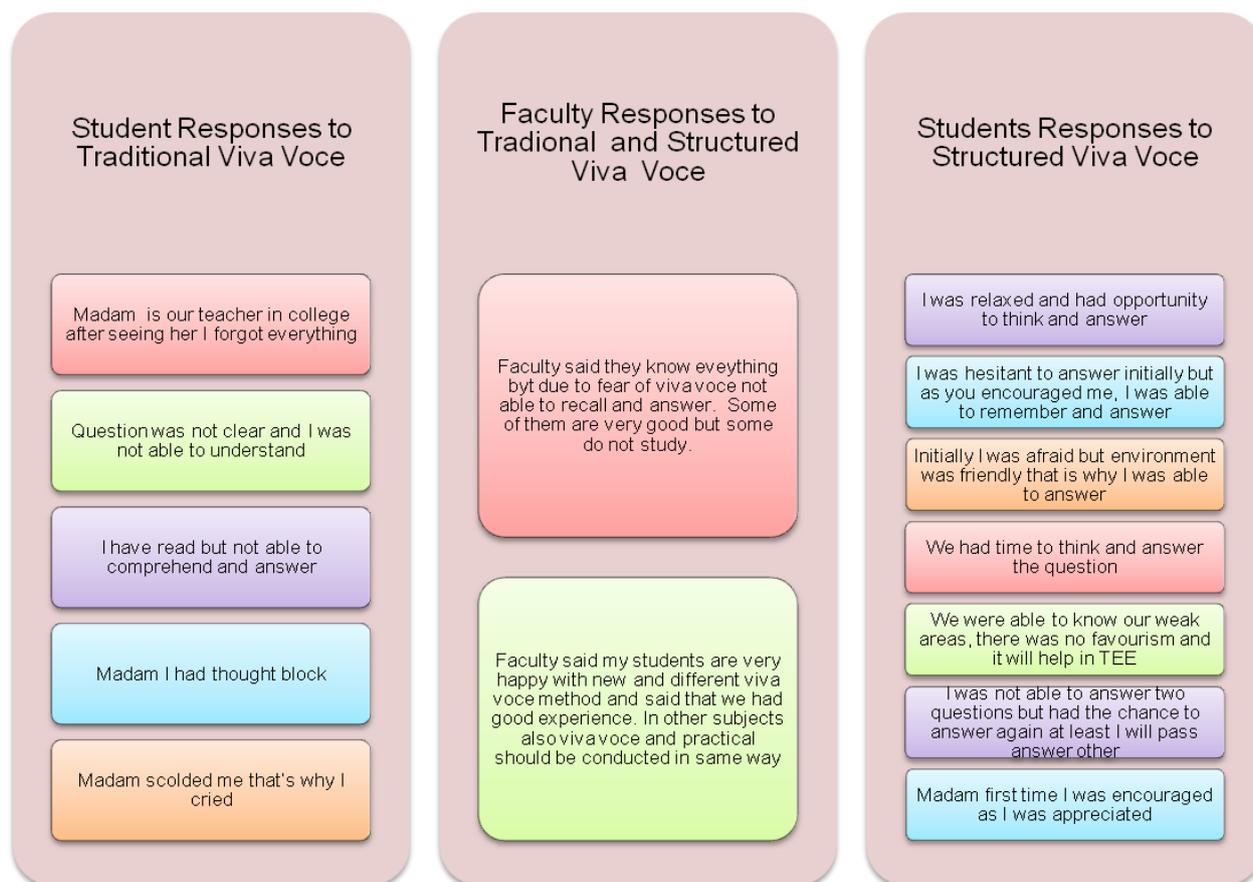
Student Responses to Traditional Viva Voce

Madam is our teacher in college after seeing her I forgot everything

Question was not clear and I was not able to understand

I have read but not able to comprehend and answer

Madam I had thought block

Madam scolded me that's why I cried

Faculty Responses to Tradional and Structured Viva Voce

Faculty said they know eveything byt due to fear of viva voce not able to recall and answer. Some of them are very good but some do not study.

Faculty said my students are very happy with new and different viva voce method and said that we had good experience. In other subjects also viva voce and practical should be conducted in same way

Students Responses to Structured Viva Voce

I was relaxed and had opportunity to think and answer

I was hesitant to answer initially but as you encouraged me, I was able to remember and answer

Initially I was afraid but environment was friendly that is why I was able to answer

We had time to think and answer the question

We were able to know our weak areas, there was no favourism and it will help in TEE

I was not able to answer two questions but had the chance to answer again at least I will pass answer other

Madam first time I was encouraged as I was appreciated

Figure 1. Reactions of students and faculty regarding traditional and structured *viva voce*

Uniqueness of the Structured *Viva Voce*

The uniqueness of structured *viva voce* was in its design, which included thought process, content to be covered, designing the easy and difficult questions, answer key, marking scheme and question slips.

- It helped to know the understanding of students to the subject, strengthens and weak areas.
- It provided the opportunity to give feedback to the students.
- It provided opportunity to assess the outcome of contact sessions and evaluation of outcome of the course.
- It provide baseline for planning strategy for practical *viva voce* for future batches.

Based on the above feedback it is planned to follow the structure *viva voce* in phase manner for assessment of students in other practical courses and other programmes.

Although this requires more efforts and is very time consuming for the faculty but over a time it can be extended to other courses and structured *viva voce* can be implemented in all the subjects. Faculty and Academic Counsellors need to be trained and standardized question bank with model answers/marking scheme/check list can be prepared to assess students and to provide feedback to the students.

The process of shifting from traditional *viva voce* to structured viva voce is presented in Figure 2.

Traditional Viva
- Participatory observation during practical examination.
- Discussion and feedback from the students in 2009, 2010, 2011 in 1 Post Basic B.Sc. Nursing PSC of IGNOU.
- Review of literature related to structured viva voce in medical education.

Pilot
- Pilot was conducted in 1 regular College of Nursing with the permission of Principal of College of Nursing.
- Structured viva voce for assessment of students was appreciated by the faculty and the students. Feedback and suggestions were taken from them. They felt is is more student friendly, bias is less, helped the student to gain confidence in answering questions and motivated to learn in case they were not able to answer. The examiner was more friendly and unbiased and not influenced by the internal examiner.

Structured Viva
- Structured viva voce was implemented for assessment of 3rd year Post Basic B.Sc. students in 2012, 2013, 2014 in another onePost Basic B.Sc. Nursing PSC of IGNOU for assessment of students in Nursing Education and Research course.
- Blocks was reviewed. 2 sets of qustiones were developed, i.e., one easy and one difficult set.
- Marking scheme and answer key was developed.
- Questions were written on the slips and were folded carefully. Students were expalined the method. They were asked to pick up the slip, read, it, understand it and answer the question. In case they were not able to answer opportunity was given to pick up new slip and repeat the process.
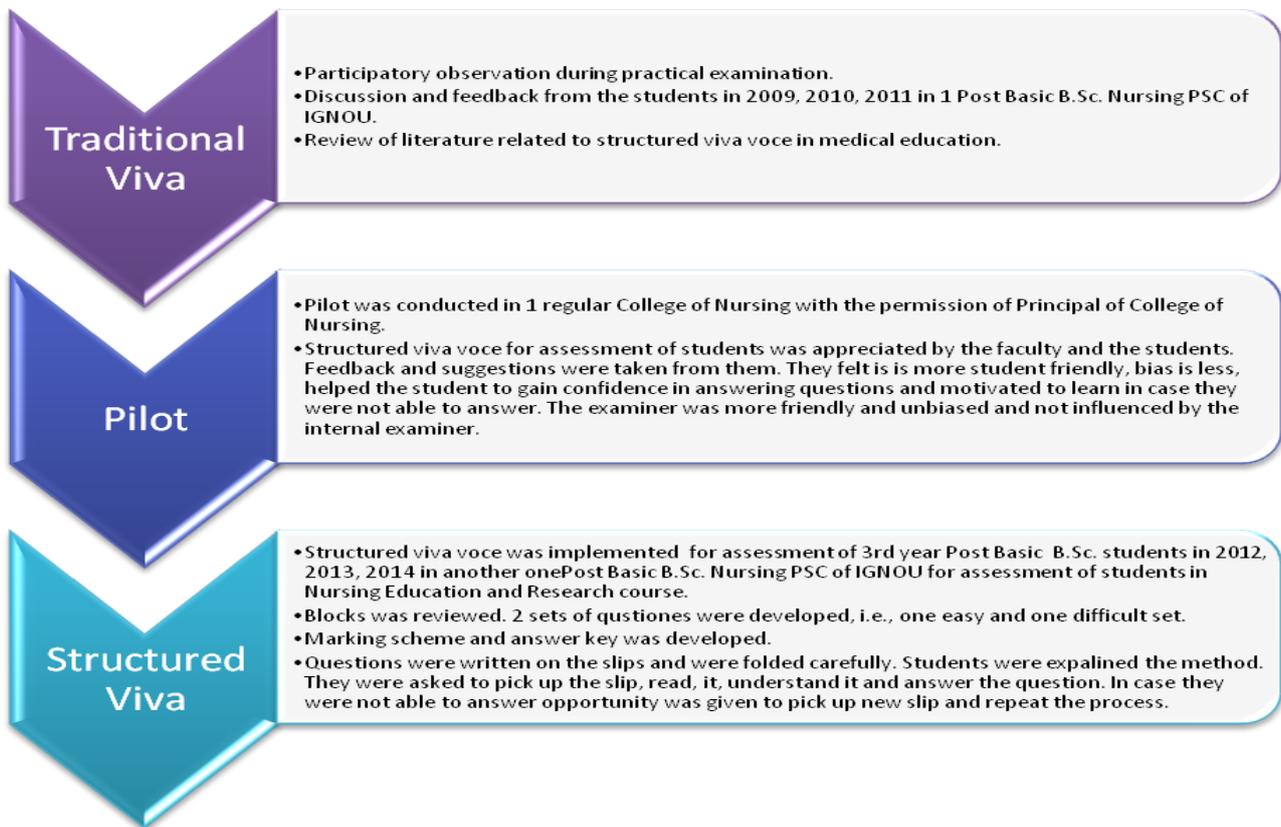
Figure 2. Process of shifting from traditional viva voce to structured viva voce

Neerja Sood
Assistant Professor (Nursing)
School of Health Sciences
E mail: neerjasood@ignou.ac.in

Infographics : An Innovative Tool for Effective Learning

It is well known that a good graphic makes information easy to access and understand. A balanced mix of text, design, colours, graphics, charts and images presented in the form of infographics can be used to express a big data or information in a simple and interesting way. Studies say that such mix of presentation is not only quick to read, but helps in understanding the difficult concepts. In fact, infographics or information graphics are graphic visual representations of information, data and or other knowledge inputs intended to present complex information in a clear and simple way. They can be simple charts, interactive maps and posters, etc., having relevant images and information on a particular topic. Infographics are already in use in the field of media and marketing for delivering news and publicity items. You would have seen this kind of infographics in several newspapers. They not only attract your attention immediately, but make you understand

the news item or the topics covered in that infographics without much effort. Just to illustrate, an online consumption infographics is reproduced below from thinkwithgoole.com (Figure 1.).
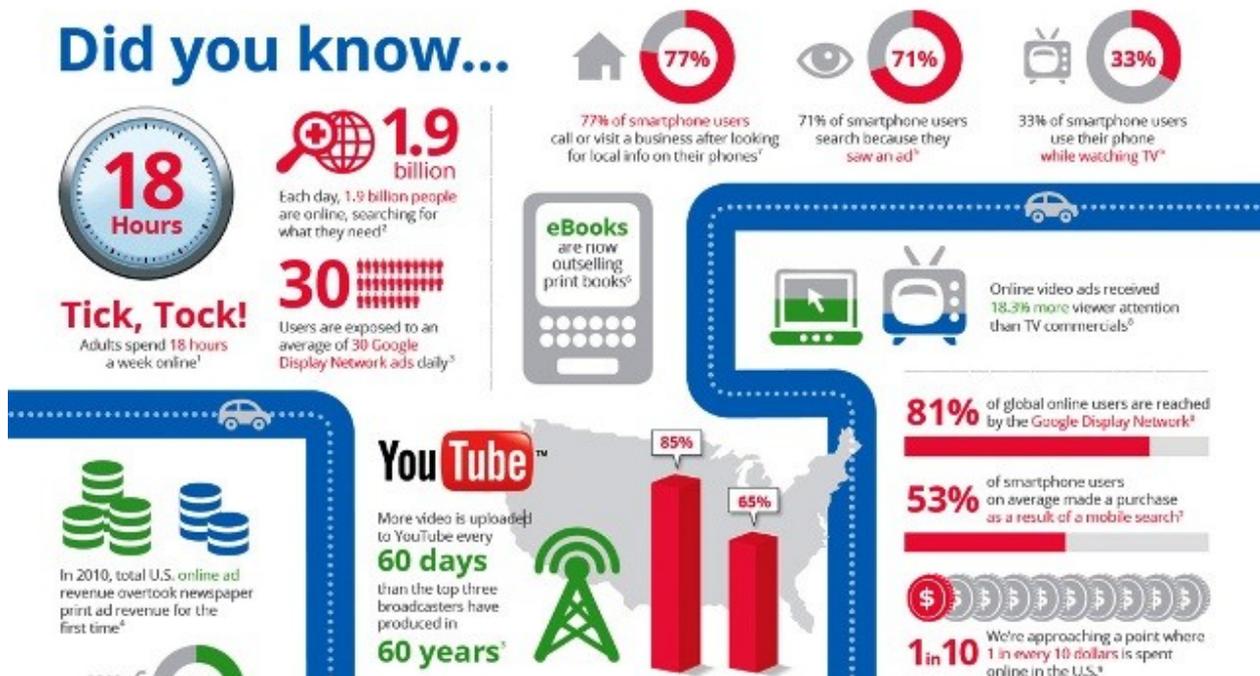

Figure 1. An Infographic depicting online consumption.

Because of their inherent strength to catch attention of the reader and make the things easy to digest, it becomes clear that the infographics have great potential to be used in the field of education. Their entry in the field of education can open immense opportunities for engaging the students in the process of learning by seeing and reading, thus enabling them to use more than one sense for learning. Teachers can also use it as classroom tool for making the teaching-learning more engaging, interactive and effective in different ways. The use of PowerPoint presentations, posters and other for imparting education and training at different levels is already in practice. But, this kind of presentation in printed study material particularly in the Self Learning Material (SLM) may bring a key change in the teaching-learning process to make it more effective.

In order to design and develop an infographics, you will have to first decide of the concepts and content be covered in the infographics and then think of its target group. After analyzing the content, we have to first come up with an effective presentation format for the same. Thereafter we should chunk the content in to small parts so as to make it easy to be digested by the students. Infographics can be created manually by using simple items like graph paper, pencil, marker, ruler etc. But, many a time, because of lack of required skills and expertise, it becomes difficult to design and develop the desired infographics. In such a situation the use of computer software both online and offline is quite useful. Infographics tools can help you create the infographics easier and faster.

Besides making PowerPoint presentation, there are several web based simple tools, which can help you design and develop infographics very quickly for different purposes. Here I am sharing about

some of the freely available online tools for creating infographics. For example Visualize.me can be used to create your infographic resume for free. Similarly, Google Developers is a perfect infographic generator for your websites. Easel.ly offers you a dozen free templates which can be easily customized. It gives you access to a library of things like arrows, shapes, connector lines and a range of fonts, colours, text style and size etc. Piktochart is another very good infographics and presentation tool enabling you to convert the boring data into engaging and impressive infographics. Visual.ly is a community platform for data visualization and infographics, which allows you both to create infographics and get them shared on social media. Venngage is a great tool for creating and publishing infographics because it's so simple and easy to use. You can choose from templates, themes, and hundreds of charts and icons as well as uploading your own images and backgrounds, or customize a theme to suit your brand. Important thing is that you can animate them the infogrphics. InFoto Free helps you making nice-looking infographics from the photographs taken by your phone. Dipity is a another very good software which can be used to create, share, embed, and collaborate on interactive, visually engaging timelines that integrate video, audio, images, text, links, social media, location, and time stamps. GetAbout.me is a free Windows app that lets you monitor your social media activity and generate infographics that help you visualize how you connect and share with your network.

In Open and Distance Learning system where the print self learning material (SLM) is the main teaching-learning tool, the use of infographics in SLM can add a new dimension. We may try this innovative tool to make our SLM more effective and interesting.

Dr. Oum Prakash Sharma
Deputy Director, NCIDE
Email: opsharma@ignou.ac.in

Open Innovation through Crowdsourcing

Introduction

With the proliferation of Information and Communication Technology (ICT), open innovation based organizations have moved towards ICT enabled inbound open innovation practices. Nowadays organizations around the world have recognised the enormous capability and potential of crowds with their varied educational, socio-cultural professional backgrounds to enrich their innovation process. Now, let us understand what is crowdsourcing.

Crowdsourcing is a type of 'open innovation', which was coined by Jeff Howe, a journalist in his article in Wired magazine [1]. Crowdsourcing refers to the process of harnessing the potential of a global pool of expert individuals and organisations, with varied educational and professional qualifications, who through a web-enabled platform in a cost-effective way develop and implement creative solutions to innovation challenges. As mentioned in Wikipedia, crowdsourcing is the process of obtaining needed services, ideas, or content by soliciting contributions from a large group of people, and especially from an online community, rather than

from traditional employees or suppliers [2].

Organizations are now implementing crowdsourcing which is one type of model for open innovation. Activities right from the generation of an idea, and the development of the idea, to formulating the concept is being implemented through crowdsourcing. This in a way unleashes the potential of crowd to not only get involved in merely given ideas but also giving a shape to it so that it can be a part of the innovative process of the organization. Crowdsourcing harnesses the collective intelligence of the crowd.

Elements of Crowdsourcing

1. **Crowdsourcer:** A person managing the entire processing of crowdsourcing is a crowdsourcer.
2. **Crowd:** People who do the work are defined as crowd.
3. **Crowd platform:** A platform on the internet where the contribution of the crowd is put and managed.
4. **Communication tool:** A tool to communicate with the cloud. This could be done through the crowd-platform or through other tools using the internet.

One can also crowdsource without a crowd-platform and using other means of communication than internet. However, crowd-platform and communication tools using internet enables an organization to gather large crowds, which can also work in collaboration rather than in isolation.

Types of Crowdsourcing for Open Innovation

- **Crowd contests for ideas:** This is one of the most straight forward way of crowdsourcing for innovation. Say, you are building a website for your organization. You have prepared the prototype of the website, however you look of better ideas on how to enhance the functionality and look and feel of the website to facilitate the stakeholders. Thus what you do is you post the prototype of the website on the internet along with a request for proposals for the same. The members submit the proposal. You select the best and develop your website accordingly. You also give a prize to the best proposal/idea to award the individual from the crowd who created it. We Thinq is one such portal, which organizes idea competitions on various issues [3]. Recently, the Ministry of Health and Family Welfare launched a contest on MyGov to crowd-source a name for the *Swachhta* Awards for Clean Public Health Facilities [4]. MyGov launched a contest for the Prime Minister's Mobile App on 4th March, 2015 in collaboration with Google. Over the period of the Ideation Phase of the contest (Phase-I), which was held between 4th March to 23rd March 2015, over 9,000 entries were received [5].
- **Microtasking through contests:** Say if you need a solution to a specific problem. In this case also, you can ask the crowd to provide possible solutions to a specific problem. It is mostly found that the solutions provided by the diverse group may enable organizations to think differently and define business rules in different ways which might be the need of the hour.

Today online platforms such as TopCoder, Kaggle, and InnoCentive provide crowd-contest services. TopCoder is a company, which organises contests in computer programming. Useful and innovative software are being developed through crowdsourcing and the software is then licensed for profit by TopCoder. The competitors involved in the development of the software are paid royalties based on the sales of the software [6]. Kaggle is an online platform dedicated to competitions related to predictive modelling and data analytics. Companies and researchers around the globe post their data, and data miners and statisticians compete with each other to solve complex data science problems. Top competitors are also invited to work on the most interesting and sensitive business problems from some of the world's biggest companies through Masters competitions [7]. Innocentive is a another crowdsourcing company which commissions research and development problems as challenges and gives award to the person who provides the best solution to the problem related to the field of mathematics, engineering, chemistry, life sciences, computer science, etc.

As mentioned by Lakhani [8] some of the common approaches to crowdsourcing are Contests, Collaborative Communities, Complementors and Labour Market. Figure 1 explains the purpose, challenges and best use of the above mentioned approaches to crowdsourcing.

	PURPOSE	CHALLENGES	BEST USE
Contests	Generating high-value solutions to complex or novel problems through large-scale and diverse independent experimentation	The problem must be generalized and stripped of company-specific details	Highly challenging technical, analytical, and scientific problems; design problems; creative or aesthetic projects
Collaborative Communities	Aggregating a large number of diverse contributions into a value-creating whole	The crowd lacks the shared culture and cohesiveness of a company, making it harder to control; intellectual property can't be protected	Customer support communities; wikis; open-collaboration projects for information and software products with complementary assets inside the firm; FAQs
Complementors	Encouraging innovative solutions to users' many different problems with your core product	It can be technologically daunting to provide access to the functions and information in the core product while protecting your assets	Open operational, product, or marketing data initiatives; content mashups; apps
Labor Markets	Efficiently and flexibly matching talent to discrete tasks	Identifying which problems to farm out and who in the organization will manage the labor pool may be difficult	Well-established categories of work that can be clearly described and evaluated; human computation; repeated tasks

Figure 1: Purpose, challenges and best use of the approaches to crowdsourcing.

Source: https://hbr.org/resources/images/article_assets/hbr/1304/R1304C_A_LG.gif

Crowdsourcing is considered as an Open Innovation tool which enables organizations to apply Open Innovation in their business processes. Some of the common elements of innovation crowdsourcing are for generating novel ideas and products, for the advantage of the organization and its improvement, for encouraging collaborative innovative communities, etc.

Please share with us your ideas and experiences of applying open innovation strategies at your workplace.

References

1. Howe, J. (2006) 'The rise of crowdsourcing', Wired, http://archive.wired.com/wired/archive/14.06/crowds.html accessed 20th May, 2015.

2. https://en.wikipedia.org/wiki/Crowdsourcing accessed 20th May, 2015.

3. https://www.wethinq.com/en/explore/idea-competition/ accessed 20th May, 2015.

4. https://blog.mygov.in/announcing-the-top-three-entries-of-contest-to-name-awards-for-clean-public-health-facilities/ accessed 20th May, 2015.

5. https://blog.mygov.in/unveiling-the-winning-ideas-of-pmo-mobile-app-contest-phase-i/ accessed 20th May, 2015.

6. http://www.topcoder.com/ accessed 20th May, 2015.

7. https://www.kaggle.com/ accessed 20th May, 2015.

8. Karim R. Lakhani (2013) 'Using Crowd as an Innovation Partner', Harvard Business Review, https://hbr.org/2013/04/using-the-crowd-as-an-innovation-partner accessed 22nd May, 2015.

Dr. Jyotsna Dikshit
Director (I/c), NCIDE
Email: jdikshit@ignou.ac.in

Innovationclub@IGNOU

The second meeting of the Innovation Club @ IGNOU was held on 13th May, 2015 at 11.00am in the Conference Room of NCIDE. The main theme of discussion was 'Innovations in Self Learning Material Development'. Dr. Kamalika Banerjee, Associate Professor from the School of Sciences (SOS) shared her experiences on evaluation parameters of Open Educational Resources (OER) on Self Learning Material (SLM). In this context, Prof. Madhu Parhar, Professor, STRIDE informed that the OER Commons has developed a tool kit on how to evaluate OER.

Thereafter, Dr. Shubha Gokhale, Professor from the SOS shared the innovative initiatives

taken by the School while developing the SLM for B.Sc. courses. Next, Dr. Praveen Kumar Jain, Assistant Professor, School of Agriculture shared about the School's innovations in the Development of SLM for their courses. He informed that in their SLM they have used Re-usable Learning Objects (RLO) as simple learning objects in the SLM. He informed that using RLOs, students can create their own courses. They have also used meta data to make it easily searchable on the internet.

Dr. Jyotsna Dikshit, Director (I/c) NCIDE apprised the members about the potentials and various uses of interactive printed self learning material using augmented reality.

NCIDE

National Centre for Innovation in Distance Education

Block G, Zakir Hussain Bhawan,
New Academic Complex,
Maidan Garhi, New Delhi-110068

Phone: 91-011-29536413,
Fax: 91-011-29536398
E-mail: ncide@ignou.ac.in

The National Centre for Innovation in Distance Education (NCIDE) was established in December 2005. It is a facility for promoting, supporting, re-engineering and disseminating innovations in Open and Distance Learning (ODL) system. The NCIDE is a ground for nurturing bright and inquisitive minds whose ideas and explorations are expected to revolutionise the ODL system to suit the needs of Gennext. The Centre's goal is to develop a culture of continued search for new and innovative solutions to offer seamless education for all, achieve cost efficiency in its operations and provide borderless access to quality education and training.

We look forward to receiving your suggestions for this e-newsletter. We also welcome your contributions for the future issues. Please send us your emails addressed to the Director, NCIDE at: ncide@ignou.ac.in.