

# ‘On Demand Examination’: Latest Pedagogy for the 21st Century

## Abstract

Pedagogy refers to the “interactions between teachers, students, and the learning environment and the learning tasks.” This broad term includes how teachers and students relate together as well as the instructional approaches implemented in the classroom. In future, the average student will wake up in the morning with a list of educational reminders that a touch screen holographic image will project in front of her face. After checking her MyFaceTube app (or some similar form of multi-purpose social media), He/she will open up a reminder from his/her tenth grade teacher that displays across the bedroom wall. As the student brushes her teeth, the teacher will give a brief summary of the previous day’s lesson and what e-books to bring to class.

**Keywords:** ODE, NIOS, IGNOU, UGC, ICT.

## Introduction

21st century pedagogy aims to develop the skills and knowledge students need to succeed in work, life and citizenship. 21st century skills can be applied in all subject areas, and in all educational, career, and civic settings throughout a student's life. It is generally used to refer to certain core competencies such as collaboration, digital literacy, critical thinking, and problem-solving that advocates believe schools need to teach to help students thrive in today's world.

21st Century skills are 12 abilities that today’s students need to succeed in their careers during the Information Age. 21st Century skills are:

1. Critical thinking
2. Creativity
3. Collaboration
4. Communication
5. Information literacy
6. Media literacy
7. Technology literacy
8. Flexibility
9. Leadership
10. Initiative
11. Productivity
12. Social skills

These skills are intended to help students keep up with the lightning-pace of today’s modern markets. Each skill is unique in how it helps students, but they all have one quality in common.

## Connecting With Students through Technology

In the very near future, educators will begin taking advantage of out-of-class technological sources. These sources will be used to reach the students outside of school, which will greatly expand the potential of what can be taught. As more portable technological inventions are created, students will use their cell phones and MP3 devices as an agent for communication, information, and entertainment. Currently, “85% of 13-to-18-year-olds have email contact lists, 81% IM buddy lists, 77% have cellular phones, and 75% have social-networking or community site profiles”.

In the future, educators can use the students’ personal devices and social networking outlets as an outside learning source for their classroom. By mixing human interaction with on-line networking, teachers will use options like Face-book, YouTube, video e-mail, Instagram, Google Classroom, and on-line presentations as a direct link to their students. Use of social media will integrate the students’ social networking sites with the educators’ professional WebPages, where out-of-class questions can be asked or discussed not only by the teacher, but also in the form of on-line classroom discussions. The use of social media and online classrooms will



**Dharma Veer**

Assistant Professor,  
Dept. of Commerce  
S.K.B.B. Govt. P.G.College,  
Harakh, Barabanki,  
U.P., India

be a way of producing out-of-class lectures in the form of podcasts, relevant links, or videos. (Podcasting is an online broadcast; it is a combination of audio and video communication through an online presentation that offers information on a certain subject or inquiry).

#### **On Demand Examination**

On-Demand Examination is a learner centric examination practice. It was first introduced in India by National Institute of Open Schooling (NIOS) on experimental basis in 2003. After successful trail, it was finally adopted in 2005 for the secondary level courses, which is extended to the senior secondary courses in 2007. Besides NIOS, the Indira Gandhi National Open University introduced on-demand examination in 2010 as a walk-in-examination against the term-end-examination. The Haryana Open School also introduced on-demand examination from 2012 for the secondary education. Other institutions like Indian Institute for Secondary and Technical Education, Delhi has also implemented on-demand examination for secondary and senior secondary education.

It is evident that mostly open and distance learning institutions started to conduct on-demand examination for assessing learners. It is worthy to mention that the facility of on-demand examination is available only for the summative assessment – that is – the term end examination. But considering the merits of on-demand examination, it is expected, to be introduced in near future for regular courses with face to face mode of transaction of the Indian universities.

#### **Review of Literature**

The on-demand examination is already in practice across the world with different terminologies as well as with slight differences in mechanism. For example, the Victorian Curriculum and Assessment Authority, of Australia is an independent statutory body which provides on-demand testing services to the schools. Besides academic field, many testing agencies related to the job world have also adopted assessment on demand. For example, an agency of California, which name is 'Criteria', offers web-based pre- employment testing related to personality, aptitude, and skills.

Several agencies and reports, dealing with educational policy of the country, have emphasized on flexibility in examinations, and the on-demand examination ensures this flexibility. The position paper on examination reforms published by NCERT, New Delhi in 2006, has also suggested the flexibility in the examination as per convenience and readiness of the learner. It recommends the gradual implementation of on-demand examination in the school education system. Recently, UGC (in June 2018), has notified to seek the opinion and suggestions about implementation of on-demand examination for regular courses with face to face mode of transaction in higher education institutions. In this notice, UGC has accepted on-demand examination as an examination

reform, and planning to implement it in the universities. UGC, in July 2018, has constituted a committee under the chairpersonship of Prof. Salunkhe to review the university examination system and to propose measures for examination reforms.

#### **Characteristics of On-Demand Examination**

1. First and the foremost characteristic of on-demand examination is that, this is an individualized, self-paced and learner centric approach of examination. Each learner has its own potential and pace of learning as well as performance in assessment. On- demand examination facilitates the learner to take examinations as per their pace and preparation. Hence, on-demand examination is regarded as a self-paced examination approach.
2. Secondly, under the on-demand examination, the learner can appear in the examination when he/she feels comfortable to appear. The learners have many personalized concerns and issues related to examination that may hamper their performance. The on-demand examination system also considers the learners' interest to different papers, preparation status, examination stress, and other situational problems in order to enhance their performance. The on-demand examination, in this way, facilitates the learner to appear in the examination, when he/she is ready and confident.
3. Thirdly, the on-demand examination is also characterized by the nature of examination schedule. The examination schedule is decided according to the choice of the individual learner. Each learner can have its own schedule of examination. Therefore, there may be as many examination schedules as the number of learners.
4. Fourthly, high degree of flexibility is another important characteristic of on-demand examination. The flexibility in the examination schedule includes the choice of examination date for each paper, number of attempts, and number of papers to be appeared in one attempt, and the order of the examination papers.

It means, it is the learner who has to decide-

1. When he/she wants to appear in the examination;
2. In how many attempts he/she wants to complete the examinations;
3. Which paper he/she wants to appear in one attempt; and
4. In which order of the papers he/she wish to take examination.

The learner can also choose the centre of examination from the given list.

Let us take an example. Suppose a learner is enrolled for a course having seven papers of study namely P1, P2, P3, P4, P5, P6, and P7. He/she wants to choose on-demand examination. In this case, the learner can decide the number of attempts to complete his/her examination, ranging from single attempt to a maximum seven attempts – one paper in each attempt. Suppose the learner decides to complete the examination in two attempts – like as –

three papers in the first attempt and four papers in the second attempt. Let, the learner chooses first to take examination of papers P3, P5, and P6 in the first attempt and P1, P2, P4, and P7 in the second attempt. Even in the first attempt, the learner may choose to appear in the examination in a certain order – for example - first P6, then P3, and then P5 with specific dates. Similarly, the learner can decide for rest of the papers of the second attempt.

Now let us have an overview of some of the existing model of on-demand examination in India. The Indian institutions have developed their own system for on-demand examination with slight variations and additional features. Therefore, on-demand examination system of each institution can be regarded as a separate model, like NIOS model, IGNOU model, etc. Let us have a look on NIOS model of on-demand examination.



The whole procedure of on-demand examination system of NIOS can be divided in following phases:

#### **On-line Registration for on-demand examination**

The first phase is on-line registration for on-demand examination. In this phase the enrolled learners have to visit the NIOS website, which has a dedicated tab for on-demand examination. Under this tab, the learner has to select the 'Registration' option. Here, the learner has to enter his/her 'enrolment number' and click the submit button.

After login, the registration form will appear. Here the learner has to enter all the required information related to examination. After filling the form, the learner has to click the submit button. Now the learner is asked to pay the fee of on-demand examination either through bank draft or through credit card. After registration the learner will get the hall ticket for the examination. The details of step wise procedure, terms and conditions are available on the NIOS website.

#### **Preparation of Question Paper**

The second phase is the preparation of question papers for the examinations. Now, the NIOS has to prepare the question papers as per the online registration. The question papers are generated from a question bank already developed by the NIOS. This task is done through computer using an application software package. The software is designed to generate individualised question paper. So, each examinee will get a unique question paper. The NIOS provides the question in Hindi and English medium only. However, the examinee is allowed to write the answer in their regional languages also. The preparation of question paper is highly confidential activity. Therefore, the detail information of the procedure is not available in public domain

#### **Conduction of Examination**

The third phase is the conduction of examination at their respective centres. The head-quarter has to deliver the question papers and other materials to the respective examination centres. The question papers may be delivered to the centres through online. This process is highly secured with the password protection, time bound and encryption feature. The examinees have to appear at the examination centre as per their schedule. However, the conduction of examination is offline and similar to the traditional examination system. The on-demand examination is not conducted in April, May, September, and November months

#### **Evaluation and Result Declaration**

At last the answer scripts are evaluated and the results are prepared. The results are declared on the website of NIOS

#### **Objectives of the Study**

The main purpose of on-demand examination is to provide the flexibility in appearing in examination in comparison to the traditional examination system, which is rigid in terms of examination schedule. In the traditional system, examinations are conducted yearly or semester wise. And the schedule of examination is decided by the institution which is same and compulsory for all the learners. On the other hand, the on-demand examination establishes a culture of flexibility in examination schedule.

It also aims to provide a chance of appearing in the examination to those learners, who are unable to attend the term end examination due to some unavoidable reasons. Especially the in-service learners may not get leave from their employers to attain the examination as decided by the institute. Sometimes, the learner may have medical or other personal problems, which do not permit him/her to attend examination according to the fixed scheduled. In all these cases, the learners are unable to complete the course within the permitted time period. In few cases the learner may quit the course due to the rigid and fixed examination schedule. Along with affecting mental health of the learner, it creates the problem of wastage and stagnation, which can be resolved by the on-demand examination.

Additionally, on-demand examination facilitates the learner to appear in the examinations in more than one attempt during programme duration. It is well-established fact that the learners differ in the pace of learning and performance due to individual differences. Some of the learners may not comfortable to appear in the examination in single attempt. Therefore their individual pace of performance is also need to be addressed with due regard in the academic assessment. This issue of the learner is resolved by the on-demand examination. In some cases, a brilliant learner could complete the programme much before the schedule and he/ she could ask for on-demand examination earlier than the normal schedule.

### **Challenges**

Each new system has some challenges that need to be addressed properly in order to function smoothly. The ODE system also has some challenges, like-

1. Management of question bank
2. Management of ODE software
3. Confidentially and security issues
4. Conduction of fair examination
5. Workforce involved in ODE system
6. Cost of on-demand examination

### **Management of Question Bank**

The most basic challenge is the management of question bank for the on-demand examination. The development of question bank is a sensitive and long term task. The regular update of question bank is also necessary to maintain its quality. It involves large number of workforce and time

### **Management of ODE software**

The second challenge is related to the management of ODE software. At first a customised software package need to be generated as per the requirement of the institution. Whereas, smooth utilization and further modification of the software require a team of software experts.

### **Confidentially and Security Issues**

Since the on-demand examination involves ICT applications, the issues related to confidentially and security are always present. The challenges like, cyber attack, unauthorised access of question bank and question paper, need to be taken care properly.

### **Conduction of Fair Examination**

The on-demand examination is a frequent affair conducted at the different centres. Therefore, the conduction of fair examination is a tedious and costly task.

### **Workforce involved in ODE system**

For smooth functioning of on-demand examination system, large number of workforce is required. Their training is also crucial aspect for success of the system.

### **Cost of on-demand examination**

The on-demand examination is a costly affair. The fee of on-demand examination is also charged per subject. It seems costly for the learners with poor financial background.

The on-demand examination system in present form may also be criticised in terms of its availability for limited subjects or courses, availability

of seats in a particular examination date and applicable for summative assessment only. Presently in India, the on-demand examination is also limited to open and distance learning courses.

### **Hypothesis**

#### **Ho**

There is no need of 'On Demand Examination' for future pedagogy trends.

#### **H1**

There is an urgent need of 'On Demand Examination' for future pedagogy trends.

### **Research Methodology**

In this study a model for student information infrastructure will be developed. The data collected will validate by a control set of 50 cases collected by the researcher. Pre-programmed questionnaire will be used for collection of data/information, the documentary evidence and uploading of this data into Server. The information will be collected as per the requirement developed in consultation with the respondents for availing ODE (On Demand Examination) facility and the authentication requirements. The functional specifications for the ODE services to be provided were worked out in consultation with the respondents at the surveyed area as well as their controlling authorities. A credit rating solution for the rural individuals will be prepared for using a separate model develops for this purpose.

The research area comprises select different colleges chosen on the basis on connectivity, contiguity and proximity in the different colleges of Barabanki district of eastern Uttar Pradesh.

The technology solution involves the use of Computer or Laptops and Internet with specially made applications for capturing data [voice, picture and data] with provision for clarification and validation and updating. The central idea in my approach is that the basic information / data required for catering to needs of the people, needs to be available in a digital form and it should be always kept current through regular updates, and validated with reference to independent sources and through internal statistical processes.

### **Research Design**

In this research, the research design is survey based & the source of data is almost secondary. The primary data was collected in the form of questionnaire & open discussion and thus happen to be original in character, whereas, the secondary data is collected from various books and internet websites for 'ODE' (On Demand Examination). The research instrument used for primary data was based on questionnaire & discussion among 50 {30 Male and 20 Female students} respondents of different colleges of Barabanki District of eastern Uttar Pradesh.

Here Chi-square test has been used as a non-parametric test as of goodness of fit, chi square test enables us to see how well does the assumed theoretical distribution fit to the observed data. As a test, it enables us to explain whether the two attributes are associated with or not.

### **Hypothesis Testing:**

The Chi-square test is applied when there are 2 categorical variables from a single population .It

is used to determine whether there is a significant association between the 2 variables.

$$\text{Chi-square} = X^2 = \sum [(O_i - E_i)^2 / E_i]$$

Where  $O_i$  = observed frequency of the cell in  $i$ th row &  $j$ th column  
 $E_i$  = expected frequency of the

cell in  $i$ th row &  $j$ th column. If the calculated value of  $X^2$  is less than the table value at a certain level of significance the fit is considered to be a good but if the calculated value is greater than its table value the fit is not considered to be a good one.

Respondents	No. of Respondents				
Male	30				
Female	20				
<b>Total</b>	<b>50</b>	<b>S N</b>	<b>Age wise data collection</b>	<b>Male</b>	<b>Female</b>
		1	Upto 12 years	05	05
		2	13-15 years	05	05
		3	16-20 years	10	05
		4	20- 30 years	10	05
			<b>Total</b>	<b>30</b>	<b>20</b>

**Area of the Study ('Barabanki' District of Eastern Uttar Pradesh)**

S.N.	Area of Survey (In Barabanki District)	Total Respondents in each area	No of Male Respondents	No of Female Respondents
1.	Govt Degree College, Harakh, Barabanki	10	6	4
2.	Mohan Lal Verma Institute, Barabanki	10	6	4
3.	JLNMPG College, Barabanki	10	5	5
4.	Rani Laxmibai Inter College, Barabanki	10	6	4
5.	Govt Inter College, Barabanki	10	7	3
	<b>Total</b>	<b>50</b>	<b>30</b>	<b>20</b>

**Findings/Result**

Ultimately, on the basis of my survey and collection of data from 50 respondents, the on-demand examination system has more merits than the traditional examination system, like;

1. The on-demand examination is an individualized and self-paced approach of examination.
2. The on-demand examination system is flexible in terms of examination schedule. Hence, the learners can appear in the examination whenever they feel prepared and confident.
3. The ODE system involves the learners in deciding the examination schedule and centre. In this way it is more democratic than the traditional examination system.
4. The on-demand examination also reduces the fear of failure in the examination and thus saves the learner from frustration and depression.
5. Under ODE system, the learners can improve their performance by reappearing in the examination as many times as they want.
6. The on-demand examination is also helpful in reducing the possibility of malpractices in the examinations as each student gets a unique question paper.

7. The on-demand examination improves the reliability of examination and transforms the learners' assessment as a continuous process.
8. It also contributes to reduce the load on the term end examinations of the institution.

These merits of on-demand examination attract the policy makers for its wider implementation including regular and higher education system. If we could make it a permanent feature of our face to face mode of higher education, it will help in realizing the aims and objectives of learner centric education.

**References**

- Allan Thathi - *Online Examination System, Paperback – 11 Apr 2017*  
 Bushra Khan - *Online Examination System*  
 Dr. Kumar Navneet - *Handbook of Neurological Examination (English, Paperback,)*  
 Maysam Sameer Hussein, Mohammed Issam Younis, Maad Issa Al-Tameemi - *Construction of an Online Examination System, Paperback – 19 May 2016*  
 Milind Shejwal - *Clinical Prescriber: For Students & General Practitioners, Paperback – 2012*