

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

NAME OF CATEGORY- OUTSTANDING E- GOVERNANCE INITIATIVE BY ACADEMIC AND RESEARCH INSTITUTIONS

Coverage – Geographical and Demographic:-

1. *Comprehensiveness of reach of delivery centres*

Uttarakhand Open University (UOU) was established by an Act of Uttarakhand Legislative Assembly in 2005 (Act No. 23 of 2005) with the aim of disseminating knowledge and skills through distance learning, using the flexible and innovative methods of education to ensure 'independent learning'. The major objective of the University is to impart quality education by maintaining high academic standards. The vision of the University is to provide the most critical components of growth through quality higher education, to the state of Uttarakhand.

Continuing with its quest for excellence and high effectiveness in the quality of education imparted to the students, Uttarakhand Open University launched its premium Online courses in 2013. The robust online platform provides the student the access to quality content from the best professors across the world. Tools such as Video lectures, audio lectures, E-quizzes, E-notes and relevant links to learning material in the web, provide an interesting and engaging learning

The University was aware that **most of the students hail from remote areas and would face network issues**. Also it was observed that almost every student today has a smart phone or a tablet and is comfortable using that for his education and entertainment needs. Taking this into consideration, the University launched the Mobile application along with the regular Online Courses. The Mobile application allows students to interact with the University. The Mobile application provides a synchronization of the online and offline academic content thus enabling students to **access the course anytime anywhere**.

Hence, the University, innovatively ensured that the students of the state (and the country) shall be able to access very high quality education **without the need of a Computer or High Speed Internet Access**.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

(ii) Number of delivery centres

The University has ensured that the programs are available to all the prospective students of the state of Uttarakhand. The eight regional centers of the University, spread across the state of Uttarakhand are equipped to help the students take admissions into the programs and get benefitted.

The University is also in the process of tie-ing up with several academic institutions who can act as admission facilitation center for the university.

(iii) Geographical

(a) National level – Number of State covered

NA

(b) State/UT level- Number of District covered

All

(c) District level- Number of Blocks covered

NA

Please give specific details:-

The Online programs are available to all the prospective students who would want to study from Uttarakhand Open University. Currently, the university is getting a huge number of student applications from across the country (some even from out of India) for admissions into the Online Programs.

(iv) Demographic spread (percentage of population covered)

We are getting very good response from the prospective students for the said program. We expect that in a time period of 3 years, we shall be able to serve at least 15000 new students of the state.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

2. Situation Before the Initiative (Bottlenecks, Challenges, constraints etc with specific details as to what triggered the Organization to conceptualize this project):

Business Problems

- a. *The primary purpose of the ODL format of education was to ensure the access of Higher education at an affordable cost, particularly to those who could not afford the conventional university programs. However, this laudable goal, proposed by the Education Commission, suffered due to the separation of the teacher from the learner.*

Solution provided – Looking at the omnipresence of Mobiles and smartphones, the University developed the Mobile application so that students could easily access the academic content and also interact with their faculty and peers. Using the Mobile application, the students can make efficient use of several chat sessions, discussion boards and emails. The students can now share their perspectives, experience a sense of equality and have easy and simple access to the faculty thus improving the communication between the students and UOU.

- b. *One of the major problems was the lack of infrastructure in the remote areas of the State. Students had to face the problems of scarcity of computers and little or no Internet connectivity most of the time which hampered the learning process.*

Solution provided - UOU provides the advantage of mobile learning or m-learning to its students. Students of online programs have an option of viewing the lectures in the offline mode (no internet connection required). The lectures and textual content can be accessed by using any android device (phone or tablet) once the mobile application is installed.

Also the mobile application has the feature to sync the online data in the presence of a 3G or Wi-Fi network. This ensures that the mobile data is continuously updated which proves beneficial to the students.

- c. *It was observed that the student turnout at Personal Contact programs (PCPs) was very low. This was not due to lack of interest in students but mostly because of the pre-occupation of students with other livelihood activities or delayed communication*

Solution provided – The students can access the study material on their mobiles online and also attend the virtual classroom sessions wherever they may be. This enables students to study even when they are travelling i.e. 'On the Go'. m-learning helps students use their mobile phones as supportive educational tools. The students have easy access to knowledge whenever they need it thus making the learning effective. It also helps shy students to interact online with their faculty and peers which they normally wouldn't have done in a regular class.

*Developing the Mobile application was only part of the process. The real challenge was compiling the massive academic content (video lectures and academic content) and making it compatible with the most basic of mobile phones. The Technical team effectively managed this by developing a **robust application which was independent of the media players**. It also has **an inbuilt PDF***

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

reader for accessing the textual content.

It was observed that Online Mobile content is available to students only when they had good Internet connectivity. This was resolved by **integrating sufficient part of the content with the application** thus enabling students to access data in an Offline mode. Also real time synchronization of the online and offline data ensures that the **mobile content is always up to date**

The application is installed in an SD Card and delivered to the student along with his study material.

3. Scope of Services/ Activities Covered (Relevance of application for end users/citizens, extent of e-enablement in terms of number of services/activities, extent to which step in each service/activity have been ICT- enabled #)

The project is aimed at providing Total Quality education for the students of the state. The University decided to handle it by a two pronged approach:

- Quality academics – This was ensured by providing a very high quality audio visual experience and content to the user leveraging the mobile platform.
- Quality administration – The University implemented a web enabled ERP solution for the management of the complete work flow of the students. The entire process from the registering of the enquiry, the counseling process, the admission management, fees payment, student servicing and examination management is automated by this ERP. The students also get their unique user ID and password through which they can access their part of the Student Portal

Overall impact of this project – Mobile Learning

- a. The interesting learning methodology coupled with ease of admission process created an interest for UOU Online programs. Lots of students from within and outside the state found the programs very relevant and valuable.
- b. The students who are frequent travelers find **accessing learning content from the mobile phones to be much easier and engaging.** Working professionals, housewives, self-employed people, businessmen and even retired people find the program helpful.
- c. The **student engagement levels have gone up** multiple times with interactive classroom sessions and online chat organized by the University.
- d. The program brought in **inclusiveness in the higher education space in the state.** The high quality courses of the university are now accessible to the students from smaller and remote parts of the state.
The access of the content through the smart phones has given a new meaning to Online learning and taken away the single impediment of the non-availability of the PC and the Internet connection.

USP of the UOU Mobile Application

The Uniqueness of the project is not in the technology alone but in the use of it –

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

- **One of the first such projects implemented by an Indian Government University**
- High quality education at an affordable price
- Automation of the entire process, from admissions, to fees, to communications, to learning, to assessments. **The m-website empowers the student and the University officials to carry out all of these functions on their mobiles**
- Introduction of **the simultaneous Online and Offline mobile learning**
- Mobile application has an interface whereby the **student can switch to the Online mode and access the Learning Management System(LMS) online** whenever required
- **Auto sync of Online and Offline data** – the Mobile is automatically updated whenever it is in a 3G or wi-fi network range
- **User friendly interface** with collapsible and expandable menus
- The academic content on the mobile application is **well structured** thus making it easy for students to navigate through the study material
- Student engagement level has increased as they **can log in through their mobiles and connect with the Online Faculty as well as their peers** which results in effective dissemination of knowledge and information
- Students have the flexibility to study and revise as per their individual schedule. This brings about greater knowledge absorption and retention
- Mobile Learning **suits different learning styles**(video learning, audio learning, reading) and allows every learner to imbibe information at his own speed and in his individual style
- Mobile Learning is more **cost effective** as compared to investing in Laptops or other Computing devices.
- **Technological barriers are eliminated** as every student is familiar with his own mobile device and hence more open to accessing the data on the same. Thus the **e-learning problems are converted into m-learning solutions**
- The Mobile application is **not restricted to a specific player** and is compatible with different media players
- The Mobile application has an **inbuilt PDF reader** to enable students to access the textual content

4. Strategy Adopted

(i) The details of base line study done

The University referred to several research reports that are available from several organizations. We also referred the NMEICT reports of the Government of India.

(ii) Problems identified

Business Problems

- a. The primary purpose of the ODL format of education was to ensure the access of Higher education at an affordable cost, particularly to those who could not afford the conventional university programs. However, this laudable goal, proposed by the Education Commission, suffered due to the **separation of the teacher from the learner.**

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

- b. One of the major problems was the **lack of infrastructure in the remote areas** of the State. Students had to face the problems of scarcity of computers and little or no Internet connectivity most of the time which hampered the learning process.
- c. It was observed that the student turnout at Personal Contact programs (PCPs) was very low. This was not due to lack of interest in students but mostly because of the pre-occupation of students with other livelihood activities or delayed communication
- d. The University also understands that Total Quality Education is about Quality Academics and also Quality Administration. Hence, dissemination of the right information to the right stake holder is a priority for Total Quality Education.

Challenges - Mobile Application

- e. Technical – Developing the Mobile application was only part of the process. The real challenge was compiling the massive academic content (video lectures and academic content) and making it compatible with the most basic of mobile phones. The Technical team effectively managed this by developing a **robust application which was independent of the media players**. It also has **an inbuilt PDF reader** for accessing the textual content.
- f. Connectivity Issues – It was observed that Online Mobile content is available to students only when they had good Internet connectivity. This was resolved by **integrating sufficient part of the content with the application** thus enabling students to access data in an Offline mode. Also real time synchronization of the online and offline data ensures that the **mobile content is always up to date**

(iii) Roll out/implementation model

We studied a models followed by a few International Universities who are the pioneers in this field of Online education. The innovative concept was further worked upon by the team and finally rolled out.

(iv) Communication and dissemination strategy and approach used

We have created a new website for the dissemination of the information (www.uouonline.ac.in). The is widely advertised also through the print media and extensively covered in the press. We have also optimized the digital media strategy for optimisation.

The University also won the award for Social Contribution at the World CSR Congress in the year 2014.

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

5. *Technology Platform used-*

(i) *Description*

We have used an Open Source architecture of the hosting of the solution. The backend uses Moodle as the learning management system. The mobile application primarily runs on Android platform.

The ERP that automates the back-end processes right from the handling of enquiry, to admission, documents management, fees collection, academics management and examination management, has been developed using Dot Net and MySql database.

(ii) *Interoperability*

The solution works on all browsers.

(iii) *Security concerns*

The solution is hosted on certain Tier 3 and Tier 4 Datacenters and we have taken reasonable precautions for management of data and application security.

(iv) *Any issue with the technology used*

None

(v) *Service level Agreements(SLAs) (Give details about presence of SLA, whether documented, whether referred etc. #)*

NA

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

6. Service Delivery – user orientation (Give details about improvement in interaction with end user and outcome, relevance of access points, Length and Breadth of services provided online etc. #)

The Uniqueness of the project is not in the technology alone but in the use of it –

- The project is one of the first such projects implemented in a record time of 6 months by any Indian University.
- The project has actually made life easier for the students.
- We also introduced our 24 hours contact center for the students.
- The project was aimed at bringing in high quality education at an affordable price.
- Social inclusion being the motive, the courses today are reaching the far flung areas too.
- The introduction of the mobile learning (Online and Offline) has given a new meaning to Online Education. The student can even view the lectures offline without internet connectivity.
- Mobile application has an interface whereby the student can switch to the Online mode and access the Learning Management System(LMS) online whenever required.
- Auto sync of Online and Offline data – the Mobile is automatically updated whenever it is in a 3G or wi-fi network range.
- The projects Learning Management System (LMS) is User friendly and the course material, replete with videos lectures and other study material which is created by veteran professors and industry experts and also provide the type of rich multi-modal content that the students always look for. The students can also rewind and revise the lectures at their own will and convenience. The textual notes are
- The first program to introduce the Online examinations for any degree program in the country.
- The program is available to foreign nationals and also to NRI's where not many Universities in our country cater to International students.
- The project contributes to the cause of social inclusion.
- The entire process, from admissions, to fees, to communications, to learning and to assessments is completely done online today.
The program has already enrolled two batches of students and has only continued to improve

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

7. Citizen Centricity (Give specific details on the following#)

(i) Impact on effort, time and cost incurred by user,

Expected economic and/or social and environmental benefits, resulting from the successful commercialization of the innovation.

- The program has contributed to the cause of social inclusion wherein students from different parts of the country can enroll themselves for the Online Programs.
- The Indian GER for the Higher Education segment stands at a measly only 11% that is much below the world average. The University aims at better penetration of the programs to all the parts of the country so that the youth of our country are better educated and developed and also to bring a considerable change in the ratio mentioned.
- Also the programs provide quality education at affordable price. The Online programs of the University are priced at the same levels as that of the Correspondence program offered by the University
- UOU gave free tablets to the first few students.
- *UOU is the only Indian University which allows a platform for the NRI's/Foreign nationals who wants to study from an Indian University without physically travelling to India (except for examinations)*

(ii) Feedback/grievance redressal mechanism

We have set up a dedicated call center to take care of the grievances and issues of the students (8899660011). We have also set up a SMS server (sms UKOU to 56767) for student support. The website setup by the university also accepts messages from the students.

All enquiries from the students gets into an automated ERP system which tracks every call to its closure.

(iii) Audit Trails,

Our learning management system does have adequate levels of logging of all events to ensure a smooth audit trail

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

(iv) Interactive platform for service delivery,

Every student is provided with a unique user ID and password. Using the same, the student can log in to his individual portal and access the system

(v) Stakeholder consultation

We take continuous feedback from our students and the solution has been going through continuous improvisations.

8. User convenience *(Give specific details about the followings #)*

(i) Service delivery channels *(Web, email, SMS etc.)*

- **Web –**
 - *Unique user ID and password to every students*
 - *Online admission form*
 - *Online payment of fees*
 - *Online application for examinations*
- **Mail**
 - *Students can write a mail to admin@uouonline.ac.in for any issues that they are facing*
- **SMS**
 - *The University has set up a SMS server for incoming queries of the students (sms UKOU to 56767)*
 - *The University also uses SMS to communicate (outbound) with the students for all critical matters*
- **Mobile**
 - *The Mobile application of the university, as mentioned above, has been proven to be extremely beneficial to the students*

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

(ii) *Completeness of information provided to the users,*

Through our website

(iii) *Accessibility (Time Window),*

24 x 7

(iv) *Distance required to travel to Access Points*

None

(v) *Facility for online/offline download and online submission of forms,*

Available

(vi) *status tracking*

All incidences Completely tracked

9. **Efficiency Enhancement** *(Give specific details about the following #)*

(i) *Volume of transactions processed,*

Currently we have about 300 students admitted into the Online programs with about 1500 students enquiring about it. This year, we expect the numbers to rise 5x

(ii) *Coping with transaction volume growth*

The solution is capable of handling large data volumes. We do not see any constraint in the next 4-5 years

(iii) *Time taken to process transactions,*

NA

(iv) *Accuracy of output,*

High

(v) *Number of delays in service delivery*

NA

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

10. Accessibility *(Give details about how following has been enhanced: user accessibility, transparency in system, single-window resolution, ease of navigation; impact on service response time, number of visits required for accomplishing the task before and after automation, Communication e-mail, SMS, web based tracking, etc.)*

- Implementation of the m-learning for the students of the University proved to be a boon for them. Students will now be able to access the high quality content from the university without the need of an internet connection. Any student, who carries a smart phone shall be able to learn online and communicate with the university.
- The implementation of the IVRS based call center support meant that the student service was just a phone call away. This call center works as a single window for the students.
- The university also introduced the SMS server for the effective communication with the students

11. Innovations *(Give details on the extent to which initiative/project is unique in purpose/goal, compared to other common e-governance projects, give details about the new processes / new activities, new steps, ICT interventions, administrative process reforms, any use of new & emerging technology functionalities introduced into the system, identification & removal of any bottlenecks / give details irrelevant steps, Comparative with Original Project (Provide a comparative analysis about how is this project similar / different in services provided, design, functionality, technology, platform etc from the original project)*

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AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

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- *We also introduced our 24 hours contact center for the students.*
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- *Social inclusion being the motive, the courses today are reaching the far flung areas too.*
- *The introduction of the mobile learning (Online and Offline) has given a new meaning to Online Education. The student can even view the lectures offline without internet connectivity.*
- *Mobile application has an interface whereby the student can switch to the Online mode and access the Learning Management System(LMS) online whenever required.*
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- *The projects Learning Management System (LMS) is User friendly and the course material, replete with videos lectures and other study material which is created by veteran professors and industry experts and also provide the type of rich multi-modal content that the students always look for. The students can also rewind and revise the lectures at their own will and convenience. The textual notes are*
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- *The entire process, from admissions, to fees, to communications, to learning and to assessments is completely done online today.*
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AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

12. Sustainability *(Give details about Self sustainability of these w.r.t Institution (hiring trained staff, training etc.), financial (Scope for revenue generation), Saving of time and money etc. #)*

The university has entered into a partnership with Schoolguru Eduserve for the proper implementation of the technology. Schoolguru provides the necessary technology infrastructure and has also deputed its trained manpower in the university for the management of the same.

The project has immense capability to generate good revenue for the university. The marginal cost of servicing the student through the internet medium is quite economical. Hence the university offered the Online courses to the students at the same price of the correspondence programs.

The automation of the processes have saved considerable amount of manual efforts in servicing the student and data reconciliation.

13. Adaptability Analysis

(i) Measures to ensure adaptability and scalability

We are trying hard to ensure that the Online programs of the university become popular with the students. The university even distributed free tablets to the first few students so that they get used to the technology. The university believes that the mobile based Online learning shall be a boon for the students hailing from the remote parts of the state.

(ii) Measures to ensure replicability

NA

(iii) Restrictions, if any, in replication and or scalability

We have found that the ability of the students to communicate with the University, in the absence of the Internet connection, becomes limited. Hence, we are improvising our Mobile app to ensure that we can leverage the sms technology to communicate with the students on the Mobile App.

(iv) Risk Analysis

We are constantly working on the various associated risks of Technological obsolescence of the system. We are also sensitive to the fact that the content going to the students need to

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

evolve continuously to ensure a contemporary education.

14. Result Achieved/ Value Delivered to the beneficiary of the project-(share the results, matrices, key learning's, feedback and stakeholders statements that show a positive difference is being made etc):

(i) To organization

The solution has been hailed by all the students. The university has been able to contribute significantly towards the enrichment of the standard of the education going to the students. The academic staff feels motivated to be contributing to a noble cause.

(ii) To citizen

The students have been immensely benefitting from the above project. The solution has been able to bring the learner closer to the educator. The solution also has been able to impart a better quality learning by the efficient use of the audio visual tools.

(iii) Other stakeholders

15. Extent to which the Objective of the Project is fulfilled - (benefit to the target audience i.e.G2G, G2C, G2B, G2E or any other, size and category of population/stakeholder benefited etc.)

The solution has been able to meet its desired objective. The results and feedback received in the first year has been very encouraging. We expect more students to adapt this form of learning in the years to come.

16. Comparative Analysis of earlier Vs new system with respect to the BPR, Change Management, Outcome/benefit, Change in legal system, rules and regulations

AWARDS SCHEME FOR EXEMPLARY IMPLEMENTATION OF E-GOVERNANCE INITIATIVES

The system has been in its nascent stage and it's too early to make any analysis. We plan to do that in a couple of years

17. *Other distinctive features/ accomplishments of the project:*

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- *Auto sync of Online and Offline data – the Mobile is automatically updated whenever it is in a 3G or wi-fi network range.*
- *You can view the Mobile application demo - <http://www.youtube.com/watch?v=ZZdrqZGzCGc>*
- *The projects Learning Management System (LMS) is User friendly and the course material, replete with videos lectures and other study material which is created by veteran professors and industry experts and also provide the type of rich multi-modal content that the students always look for. The students can also rewind and revise the lectures at their own will and convenience. The textual notes are*
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This is just an indicative list of indicators. Applicant can add on more information based on suitability of the project nominated.