

# Web Support Portal

## *CHCWM Programme*

---

### **Background**

The proliferation of Information Communication Technology (ICT) in the 21st century has created a global impact in the development of higher education in general and transformation particularly of distance education, from providing learning through print based technology to interactive, flexible, intelligent learning environments. Invention is the mother of necessity, hence, obstacles and problems lead to innovations.

The web support portal of Certificate in Health Care Waste Management Programme of School of Health Science, IGNOU is another innovative intervention of NCIDE to revolutionize the learning experience of the distance learner by captivating and empowering the so called isolated learners to successes. This programme is targeted at the professionals and paraprofessionals working in the health care, like doctors, nurses, laboratory technicians and sanitary inspectors. It also targets the programme managers and the hospital or health care facility administrators. Since the programme has an eligibility of undergraduate level, anyone in the community who is interested can also enroll and benefit from the programme. The portal enables the learners to access interactive ready reference material anytime, anywhere by using any digital supported device. It gives them an opportunity to go through the interactive material along with the identified resources made available to them before attending the counseling sessions. The web support portal provides individualized guidance and counselling to the learners. It provides an effective information system with a range of activities and interactions that impacts teaching and learning. Since the target group is so vast and diverse, the flexibility and the type and range of material that can be accessed can be decided by the individual learners as per their need thus making learning more individualistic.

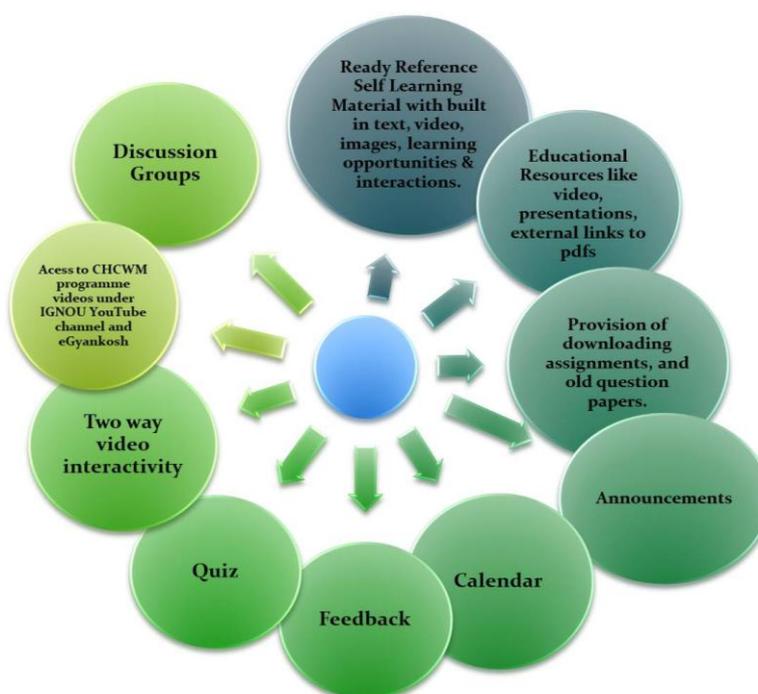
### **Need of the Innovation**

Proper Health care waste management is crucial not only for the patient's safety and the occupational health of the health care personnel, but also for the health of the community at large since the hazards of improperly managed waste as well as the risks posed by it are appalling. Initiating a change in the attitude of all people involved with the generation and management of health care waste, through sensitization, education and training, is therefore essential. There is no formal training or course available in the conventional system to address these issues. The guidelines for the management of health care waste by the health functionaries of all the health care facilities and the treatment and disposal by all the Central Bio-Medical Waste Management and Treatment Facilities has been notified in the gazettee notification by Government of India as the Bio-Medical Waste Management Rules 2016, and its amendments thereof. Training of all the health care functionaries at the time of induction and on yearly basis has been mandatory in these Rules. It thus became imperative to initiate a training programme in this regards. Since the main target groups are the people already working with and handling the health care waste, a training programme through the distance mode seemed the best possible solution. To address the diverse needs of the vast and different target group with respect to age, qualification, experience, regional locations and individual learning needs, a web enabled teaching and learning was visualized and developed on an experimental basis for providing individualized training. Keeping in mind that all learners may not have access to the net connectivity and/the multiple media devices, print material was kept as one of the

essential components of the programme package. The audio videos, radio counselling, web conferencing, synchronous and asynchronous chat sessions were all kept as add-ons and supplementary to the print material.

## Description of the Innovation

The idea of developing the web support portal was discussed in a meeting held between Prof. Ruchika Kuba and Dr. Jyotsana Dikshit way back in 2015. Initially it was decided to provide a Moodle based Learning Management System as a web support platform for the CHCWM programme. A prototype of the same was developed however in view of resource crunch it was decided to use the freely available G-Suit (Google) technologies with IGNOU to provide web support to the learners. At this time no one in the University had even thought of applying such freely available technologies to the learners. Components of the web support portal are mentioned in Figure 1.



**Figure 1 : Components of Web Support Portal**

## Innovative Features

NCIDE has deployed an innovative web support solution for teaching learning for distance educators as well as learners by using open source tools with platform independent technology. The web support solution enables the distance educators specifically teachers by using drag and drop facilities to create a synchronous and asynchronous web enabled teaching and learning environment which includes uploading of interactive ready reference self-learning material, creating important programme/course announcements, assignments, uploading useful learning resources like PowerPoint presentations, web resources, video resources, creation of discussion forums, etc. The learners can also access interactive self-learning material, programme/course relates material anytime, anywhere, through the web support platform. They can interact with the peers, and counsellors synchronously and asynchronously using discussion forums, chat and video conferencing facility. As a prototype the solution is being implemented for the Certificate in Health Care Waste Management Programme of School of Health Sciences, IGNOU. Some of the innovative features (See Figure 2) include the following :

- Students can access web enabled self-learning material as soon as their admission is confirmed, they need not wait for the printed material.
- Pedagogically, the web support platform enables the learners to access the content through various e-learning methods and strategies including mind-maps, interactive self-learning materials presentation, demonstration of skills through video, drill and practice through virtual class, open source games, case studies, role-plays, discussion and interaction and collaboration, through synchronous and asynchronous mode of communication.
- As the web support is based on technologies provided by Google the technology infrastructure in context to hardware as well as software required by distance educators and counsellors as well as the learners is minimal.
- As software has pre-installed themes, templates, sites pages and page design layout interface designs for the creation of web pages, content, navigation, etc. it is very easy for distance educators to create their own pages by using drag and drop facilities and publish them nicely for any device.
- Content can be inserted from Google drive as well as other applications. For example, content from Google Docs, Sheets, Slides, Forms, Charts, Videos, or Images from Google Drive into a section of the web portal. One can also insert Google Calendars, Maps, and YouTube videos, too.
- Through the web support portal the learners can download assignments and have access to latest information.
- The eligible learners can use the facilities provided by the web support portal.
- Multiple layers of security, including leading encryption technology like HTTPS and Transport Layer Security.



**Figure 2 : Screenshot of the Web Support Portal**

## Achievements

The web support portal was tested on the learners of January 2018 session. After receiving the feedback from the learners of the web support portal is being made ready for January 2019 batch of the CHCWM programme. The learners appreciated the web support portal.

## Applications and Uses of the Innovation

NCIDE is collaborating with School of Health Sciences and has developed an interactive web support portal for Certificate in Health Care Waste Management Programme, a programme developed in collaboration with World Health Organisation (WHO), SEAR Region. The portal includes interactive learning material, resources like PPT, videos, PDF of reference material, etc. Other sections of the web support portal includes provision of downloading assignments, and old question papers, announcements, calendar, feedback, quiz, etc. A prototype of the web support portal for the CHCWM Programme for the July 2017 batch and January 2018 batch has been deployed.

The innovations developed were used for the preparation of the course material. The course writers included eminent subject experts from different parts of the country. Although the course material had been meticulously worked out by an expert committee consisting of experts belonging to the Health Ministry, WHO, Medical Colleges, Programme in charge and subject experts, overlaps in the units across the blocks was foreseen during material development. To avoid this, it was imperative that the course writers interact with each other during the writing process. This would not only ensure that the overlaps could be eliminated or at least minimized, but also enable to maintain a uniformity among the different units as far as the difficulty level and style of writing was concerned. The experts were very busy senior people residing in different parts of the country. To save on the time and money, viber conferencing was carried out instead of the course writers meeting. This turned out to be useful in not only smoothening out the differences between the texts but also helping the experts get a feel of working together for a common cause. The viber conference also helped to clarify a number of doubts that the writers had during the process of writing and could be attended to multiple times, without waiting for a single face-to-face interactions to be arranged.

The web portal was also put to a test on the first and pilot batch of the revised CHCWM programme. There was continuous two way communication between the programme coordinator and the students. Administrative and academic support was provided, by providing the relevant and required information from time to time and clearing their doubts within an hour or two. An interaction between the programme coordinator and the students was made feasible by the programme incharge during the induction meeting of students conducted in the respective the programme study centres by using the WhatsApp call, wherein the individual students addressed their administrative difficulties that they faced. The students could access the study material from the portal and received regular updates regarding the last date for submitting assignments, filling of the examination form, uploading of hall tickets, etc.

## Way Forward

The web support portal with the above mentioned technology features is developed using G-Suit which is free for IGNOU. On the same pattern all the schools can have their programme portal and can use the facility available to interact with the learners, to facilitate and support the learners.

## **Coordinators and Innovators**

**Dr. Jyotsana Dikshit**

**Prof. Ruchika Kuba**, Professor, SOHS, IGNOU, New Delhi

**Email :** [jdikshit@ignou.ac.in](mailto:jdikshit@ignou.ac.in), [rkuba@ignou.ac.in](mailto:rkuba@ignou.ac.in)

**Facilitators :** Dr. M. Murli Rao, Head CD and Mr. L. M. Pant, Deputy Director Computer Division (For providing access to few tools)

**Period :** 2016 Onwards