An Innovative tool for Community Development through Distance Education

Dr. Jothi, Dr. Santhy and Dr. Valluvaparidasan
Directorate of Open and Distance Learning, Tamil Nadu Agricultural University
Coimbatore – 641 003, Tamil Nadu, odl@tnau.ac.in

ABSTRACT

The Directorate of Open and Distance Learning, one of the constituent units of the Tamil Nadu Agricultural University started during April 2005 is vested with the responsibility of offering distance learning programmes through correspondence mode *viz.,* PG Diploma programmes (3), PG Degree programmes (3) and Certificate courses both in regional language (21) and in English (5) for the benefit of various segments of the farming community, entrepreneurs and self help groups.

The study materials prepared by the experts and edited in the Self Instructional Mode (SIM) are issued to the ODL learners. Presently, an open learning source which is gaining momentum is the Reusable learning objects (RLOs). Eco Learn IT is a website which provides access to RLOs which are small learning units which is a type of online instrument that provides a digital educational resource which can be reused, scaled, shared and stored in a repository. RLOs vary in size, scope, and level of granularity ranging from small chunks of instruction to a series of combined resources to provide a more complex learning experience. RLOs are available in open-access mode and can be shared among the global community of learners.

RLO-based learning material can be implemented in various digital formats including text, artwork, video, audio and animations to add interactive features. RLOs can be implemented in a variety of digital modes including text entries, images, illustration, photographs, Power Point slides, figures, maps, graphs, simulations, models, audio, video, Flash animations, interactive tools and their combinations.

The Directorate of Open and distance learning of TNAU is currently focusing on creating RLO's on various distance learning programmes of TNAU.

INTRODUCTION

Technology is the agent for radical overhauling of the development process. All the major technological innovations can bring a change. After affecting screening changes, the internet has brought a paradigm shift in the way people learn.

Online learning is the technology supported learning, where medium of learning through internet technologies. In the recent years, e-learning has constantly developed itself in terms of content and technology, and its use has been intensified in all educational sectors. Various online materials are emerging in the teaching era, of which one of the toolkits to support learning is Reusable Learning Objects (RLOs).

Reusable Learning Objects (RLOs) are based on an innovative method of thinking about learning and provide a digital educational resource that can be reused and shared from a central online repository with the support of instruction and learning. RLO supports single learning objective, varying in size and shape, and level of granularity ranging from small chunks of instruction in a series of combined resources to provide a more complex learning experience. Widespread credit to introduce the term *Reusable LOs* (RLOs) is given to Wayne Hodgins (Wiley, 2002) that was inspired by one of his children playing with Lego building blocks while mulling over some problems regarding learning strategies. An RLO is an independent unit of learning content that is designed for reuse in multiple instructional contexts that is the smallest standalone unit of learning on a specific topic (Polsani, 2003).

Wiley (2002) used the atom as a metaphor to explain RLOs, which is something that can be understood across cultural boundaries in India, U.S. and elsewhere. Bloom's taxonomy has been adopted for rapid prototyping of LOs for agricultural and biological engineering education (Sepúlveda et al., 2006). Learning object pioneers such as NETg standardized LOs into the following format: (i) Learning objective; (ii) A unit of instruction that teaches the objective; and (iii) A unit of assessment that measures the objective. Barritt and Alderman (2004) describe CISCOs successful RLO strategy that at its core contains (i) content, (ii) practice, and (iii) assessment components to meet a specific learning objective.

USES OF RLOs

RLOs have been used in different disciplines including academia military, government and corporate world. They can enhance learning due to their clear organizational structure and focus on explicit learning objectives. It provides a mechanisms of sustained and endowed knowledge in the form of e-learning material that is available online beyond specific time limited research projects.

Basic and comprehensive knowledge as well as research and extension materials can be encapsulated in the form of RLOs disseminating knowledge to a wide and diverse audience of learners.

Assemblies of RLOs developed by institutions or individuals, respectively are shared and made accessible online. These topical assemblies of RLOs can be scaled up to build large digital repositories to reach out to the global audience.

The creation of RLOs is open to everybody engaging all people with content enterprise. (eg. Soil Scientists, Hydrologists, Agrl. Engineers and environmental scientists)

IMPLEMENTATION OF RLOs

Reusable learning objects can be implemented in a variety of digital modes including text entries, images, illustrations, photographs, power point slides, figures maps, graphs, simulations, models audio, video, animations, interactive tools and their combinations.

GRANULARITY AND SCALE OF RLOs

RLOs very in size and scope. Some RLOs are short (2-4 minutes of learning), while others require more time (Max about 15 mts of learning). If the RLO are too long, they reduced the potential to be reusable and do not accommodate the attention most of the learners.

THE IDEAL LENGTH OF RLO IS GRANULARITY SIZE

To address the granularity issue of Loshilley (2002) use the storm as a metaphor, which is something that can be understood across cultural and geographic boundaries. This might jump start our understanding of RLOs and the way they are put together into instructionally meaningful limits.

SIGNIFICANCE OF RLOs

It is high time that the full potential and utility of ICT, is harnessed to service the specific needs of learning communities. New ICT can accelerate broad based growth in teaching and by increasing awareness. It helps to make it a central pillar of overall development strategy. The RLOs help to know the respondents understanding of the learning objects.

RLO IN THE BACKDROP OF ODL

Presently the open and distance learning is gaining momentum in which RLOs make a crucial role, as small learning units. A website named Eco learn IT provides access to RLOs which have three components (1) learning. Objective (ii) knowledge / instruction and (iii) assessment. Then RLOs are available in Open access mode and viewed by a gland spectacle of global community of learners.

Reusable Learning Objects posses the following observations:

- Digital / web-based-accessible
- Self-contained-each RLO focuses on a specific topic / learning objective
- Small in size-to focus learner's attention (2-15 minutes)
- Flexible – RLOs are easy to update; provide access to quality teaching and learning resources for a wide range of learners
- Cost-effective – avoids duplication of learning materials and provide intellectual capital

RLOs on the market today can be used as constructivist learning environments and have potential to capitalize on goal oriented nature of human learning processes. The tool kits have been found to, offer versatility for both student, independent learning and for based and class room teaching purposes.

The open and distance learning (ODL) paradigm as practiced in India has demonstrated its ability to reach large numbers of learners effectively. Methods and practices derived from ODL can now be fruitfully harnessed in support of reaching farmers with new technologies. The NAIP (National Agricultural Innovative Project) has sanctioned a project on "Innovations in Technology Mediated Learning : An Institutional Capacity Building in using Re-usable Learning Objects in Agro-horticulture" with the consortium partners with IGNOU, ICRISAT and YCMOU. The consortium will fill the knowledge gap between agricultural researchers, agricultural professionals and small farmers by creating collaborative learning materials from agricultural research and delivering them into the hands of teacher and learners.

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